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The news magazine of the International Union of Pure and Applied Chemistry (IUPAC)

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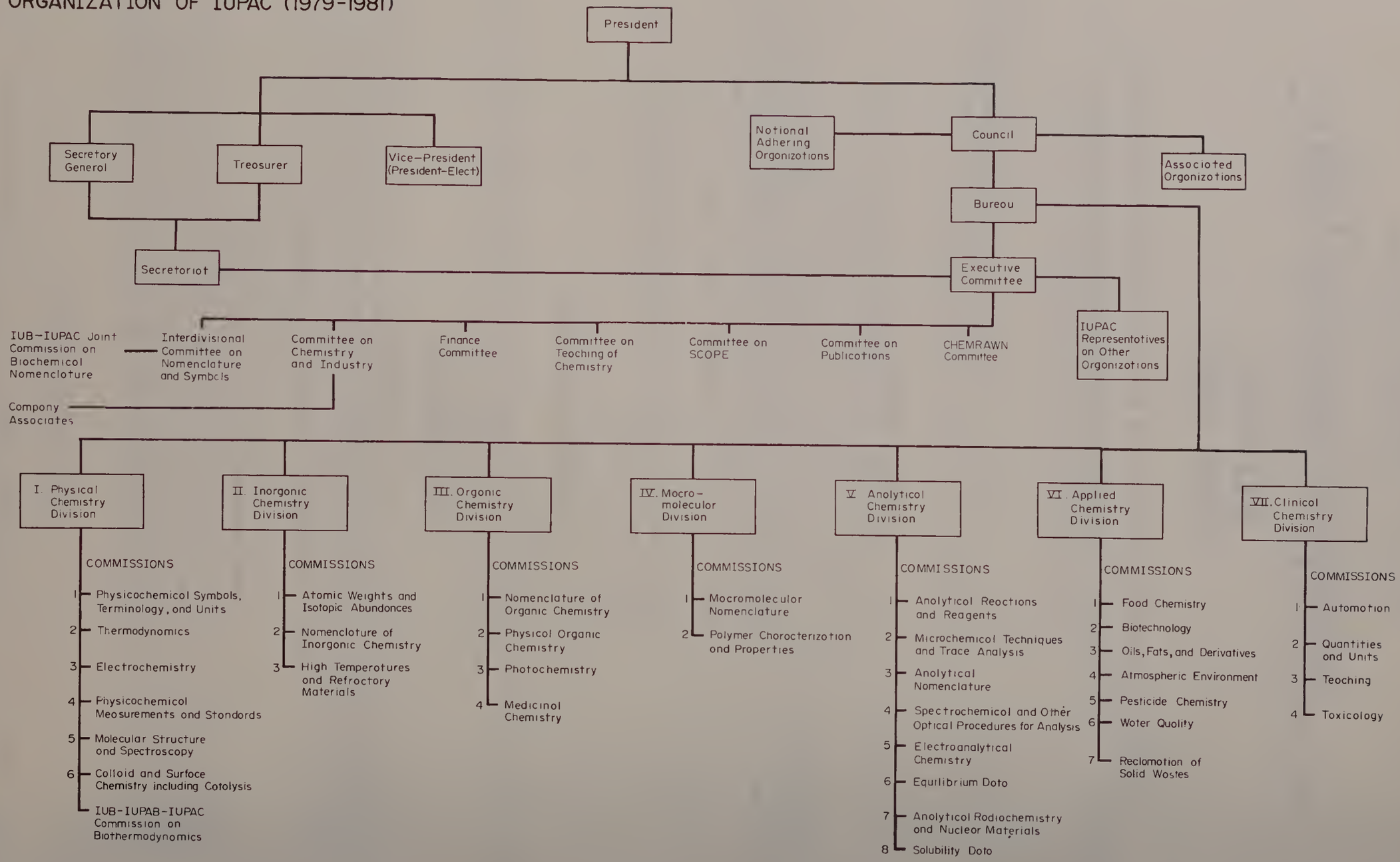

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Japan
Prof. T. Plebanski (1977-1981)
Poland

COMMISSION ON MOLECULAR STRUCTURE AND SPECTROSCOPY (I.5)
(Established 1955)

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Prof. C.N.R. Rao (1977-1981)
Prof. C. Sandorfy (1975-1983)
Dr. J.F.J. Todd (1979-1983)
Dr. D.W. Turner (1975-1983)

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Prof. F. Dörr (1975-1981)
Prof. J.R. Durig (1977-1981)
Mrs. Jenny G. Grasselli (1977-1981)
Prof. S. Leach (1977-1981)
Prof. H. Ratajczak (1979-1983)
Dr. P.M. Rentzepis (1977-1981)
Dr. H.A. Willis (1975-1981)

National Representatives
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Canada
Prof. Bogusława Jeżowska-Trzebiatowska (1979-1981)
Poland

Prof. Sir Harold Thompson (1977-1981)
United Kingdom

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Chairman

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Prof. M.O. Bulanin
Prof. A.R.H. Cole
Prof. M. Delhaye
Prof. R.N. Jones
Prof. F.A. Miller
Prof. D. Papoušek
Dr. A.L. Smith
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SUBCOMMITTEE ON MASS SPECTROSCOPY

Dr. J.F.J. Todd
Chairman

Members
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Prof. K. Biemann
Dr. H.F. Grützmacher
Dr. R.P. Lossing
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Prof. E. Roth
Prof. V.I. Tal'Rose
Dr. M. Tsuchiya

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Chairman

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Prof. G. Wagnière
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SUBCOMMITTEE ON SYMMETRY NOTATION FOR MOLECULAR SPECTROSCOPY

Prof. C.J.H. Schutte
Chairman

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COMMISSION ON COLLOID AND SURFACE CHEMISTRY INCLUDING CATALYSIS (I.6)

(Established in its present form 1979)

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Vice-Chairman
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Prof. M.W. Roberts (1975-1983)
Prof. K. Tamaru (1977-1981)
Prof. E. Wolfram (1979-1983)

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Prof. N. Churaev (1979-1983)
Dr. P.C. Gravelle (1977-1981)
Prof. G.L. Haller (1977-1981)
Prof. R.J. Hunter (1979-1983)
Prof. P. Mukerjee (1975-1983)
Dr. H. van Olphen (1975-1981)
Prof. K.S.W. Sing (1979-1983)
Dr. Lisbeth Ter-Minassian-Saraga (1975-1983)

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Canada
Prof. R. Haul (1978-1981)
Federal Republic of Germany
Prof. W. Schirmer (1975-1981)
German Democratic Republic
Prof. L.G. Nagy (1979-1981)
Hungary
Prof. A.S. Kertes (1979-1981)
Israel
Prof. A. Kitahara (1979-1981)
Japan
Prof. D.H. Everett (1975-1981)
United Kingdom

SUBCOMMITTEE ON CATALYSIS

Prof. J. Haber
Chairman
Prof. J.H. Block
Secretary

Members
Dr. P.C. Gravelle
Prof. G.L. Haller
Prof. R.S. Hansen
Prof. R. Haul
Prof. M.W. Roberts
Prof. K.S.W. Sing
Prof. K. Tamaru

SUBCOMMITTEE ON CHEMICAL PHYSICS OF SURFACES

Prof. R.S. Hansen
Chairman

Members
Dr. P.C. Gravelle

Prof. J. Haber
Prof. K.E. Heusler
Prof. M.W. Roberts
Prof. K. Tamaru

SUBCOMMITTEE REPORTING ON GAS ADSORPTION DATA

Prof. K.S.W. Sing
Chairman

Members
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Prof. R. Haul
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(Established 1949)

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Prof. B.F. Myasoedov (1979-1983)
Prof. E. Roth (1979-1983)
Prof. A.A. Vlček (1971-1981)

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Dr. H.S. Peiser (1975-1981)

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Union of Soviet Socialist Republics

SUBCOMMITTEE ON ASSESSMENT OF ISOTOPIC COMPOSITION

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Chairman
Dr. I.L. Barnes
Secretary

Members
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Dr. R. Hagemann
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(Established 1921)

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Vice-Chairman
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Prof. D.H. Busch (1979-1983)
Prof. E. Fluck (1979-1983)
Dr. Piroska Fodor-Csányi (1979-1983)
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Prof. K. Yamasaki (1979-1981)
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Sweden

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(Established 1951)

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Prof. G. de Maria (1973-1981)
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Prof. R. Metselaar (1979-1983)
Prof. S. Mrowec (1977-1981)
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Prof. T. Sata (1977-1981)
Prof. R. Sersale (1977-1981)
Prof. W. L. Worrell (1977-1981)

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Arab Republic of Egypt
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Prof. J. Drowart (1969-1981)
Belgium
Dr. A.P.B. Sinha (1977-1981)
India
Prof. A. Magnéli (1969-1981)
Sweden
Prof. G. Bayer (1975-1981)
Switzerland
Prof. P. Grieveson (1979-1981)
United Kingdom
Prof. G.M. Rosenblatt (1978-1981)
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ORGANIC CHEMISTRY DIVISION (III)

(Established 1949)

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Vice-President
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Past-President
Prof. G. Modena (1975-1983)
Secretary

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Prof. J.F. Bunnett (1977-1981)
Prof. C.W. Rees (1979-1983)
Prof. S. Sarel (1977-1981)
Prof. J. Wróbel (1977-1981)

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Prof. S. Gronowitz
Dr. W. Koch
Prof. H. Musso
Dr. Sukh Dev
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COMMISSION ON NOMENCLATURE OF ORGANIC CHEMISTRY (III.1)

(Established 1921)

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Dr. A.D. McNaught (1979-1983)
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Mr. E.W. Godly (1979-1983)
Mr. S.P. Klesney (1979-1983)
Dr. K.L. Loening (1979-1983)
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Prof. R. Panico (1979-1983)
Prof. P.A.S. Smith (1979-1983)
Prof. F. Vögtle (1979-1983)
Dr. O. Weissbach (1979-1983

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Hungary

COMMISSION ON PHYSICAL ORGANIC CHEMISTRY (III.2)

(Established 1973)

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Chairman
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Prof. V. Gold (1973-1981)
Prof. G. Illuminati (1977-1981)
Prof. M.J. Perkins (1977-1981)
Prof. K. Schwetlick (1977-1981)
Dr. J. Toullec (1973-1981)

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Prof. R.D. Guthrie (1977-1981)
Dr. R.A.Y. Jones (1977-1981)
Dr. J.S. Littler (1979-1983)
Prof. J. March (1977-1981)
Prof. J. Reedijk (1977-1981)
Prof. A. Streitwieser, Jr. (1977-1981)

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Sweden
Prof. M.Lj. Mihailović (1979-1981)
Yugoslavia

COMMISSION ON PHOTOCHEMISTRY (III.3)

(Established in its present form 1975)

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Secretary
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Prof. K.N. Houk (1977-1981)
Dr. A.A. Lamola (1973-1981)
Prof. K. Tokumaru (1979-1983)
Prof. M.S. Wrighton (1975-1983)

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Prof. H. Iwamura (1979-1983)
Prof. J. Michl (1977-1981)
Prof. M. Ottolenghi (1977-1981)
Prof. C. Sandorfy (1977-1981)
Dr. D.W. Turner (1975-1983)
Prof. D.G. Whitten (1977-1981)
Prof. U.P. Wild (1977-1981)

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Arab Republic of Egypt
Prof. O.P. Strausz (1979-1981)
Canada
Dr. K. Lempert (1979-1981)
Hungary

COMMISSION ON MEDICINAL CHEMISTRY
(III,4)

(Established in its present form 1975)

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Prof. W.Th. Nauta (1977-1981)
  Secretary
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Dr. T. Kobayashi (1977-1981)
Prof. E. Mutschler (1975-1981)
Prof. P.S. Portoghese (1977-1981)
Dr. H. Timmerman (1979-1983)
Prof. C.G. Wermuth (1979-1983)

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Dr. F.H. Clarke (1977-1981)
Prof. R. Dahlbom (1975-1981)
Prof. R.G. Glushkov (1977-1981)
Dr. E. Schröder (1977-1981)
Prof. Barbara Serafin (1979-1983)
Dr. T.I. Wrigley (1977-1981)

MACROMOLECULAR DIVISION (IV)

(Established 1967)

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Vice-President
Dr. A.J. de Vries (1971-1981)
Secretary

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Prof. M. Mandel (1977-1981)
Prof. T. Saegusa (1979-1983)
Prof. J.K. Stille (1979-1983)
Prof. Ph. Teyssié (1979-1983)
Prof. A. Valvassori (1979-1983)

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Dr. D. Heinze
Dr. A. Kepes
Dr. R.H. Marchessault
Prof. A. Nakajima
Prof. D.C. Pepper
Prof. R.C. Schulz
Prof. F. Tüdös
Dr. F.H. Winslow

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Australia
Prof. O. Olaj (1979-1981)
Austria
Prof. Eloisa B. Mano (1979-1981)
Brazil
Prof. I.M. Panayotov (1968-1981)
Bulgaria
Prof. L.E. St. Pierre (1979-1981)
Canada
Prof. J. Kálal (1974-1981)
Czechoslovakia
Prof. J. Kops (1974-1981)
Denmark
Dr. E.F. Engel (1968-1981)
Federal Republic of Germany
Prof. J.J. Lindberg (1971-1981)
Finland
Prof. P. Sigwalt (1972-1981)
France
Prof. B. Philipp (1975-1981)
German Democratic Republic
Prof. G. Hardy (1975-1981)
Hungary
Prof. A. Silberberg (1968-1981)
Israel
Prof. M. Farina (1976-1981)
Italy
Prof. S. Okamura (1975-1981)
Japan
Prof. G. Challa (1977-1981)
Netherlands
Dr. O. Smidsrød (1978-1981)
Norway
Prof. E.W. Neuse (1976-1981)
Republic of South Africa
Prof. J. Fontan (1978-1981)
Spain
Prof. B. Rånby (1969-1981)
Sweden
Prof. Sir Geoffrey Allen (1975-1981)
United Kingdom
Prof. W.J. Bailey (1968-1981)
United States of America

Representative of ICR
Dr. A.J. de Vries

Representative of IUPAB
Prof. H.A. Scheraga

Representative of IUPAP
Prof. G.W. Becker

COMMISSION ON MACROMOLECULAR NOMENCLATURE (IV.1)

(Established 1968)

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Prof. I. Mita (1979-1983)
Prof. I.M. Papissov (1979-1983)
Prof. W. Ring (1971-1981)
Prof. P. Sigwalt (1975-1983)

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Dr. R.B. Fox (1979-1983)
Dr. K.L. Loening (1977-1981)
Dr. R.H. Marchessault (1977-1981)
Prof. S. Penczek (1979-1983)
Prof. N.A. Platé (1979-1983)
Dr. U.W. Suter (1979-1983)
Prof. T. Tsuruta (1979-1983)
Dr. R.E. Wetton (1977-1981)

National Representative
Prof. Eloisa B. Mano (1979-1981)
Brazil

COMMISSION ON POLYMER CHARACTERIZATION AND PROPERTIES (IV.2)

(Established 1973)

Titular Members
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Chairman

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Prof. D.T. Clark (1977-1981)
Dr. P.L. Clegg (1975-1981)
Dr. G.C. Eastmond (1977-1981)
Prof. G. Hinrichsen (1977-1981)
Dr. Th.G. Scholte (1975-1981)

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Prof. C.H. Bamford (1979-1983)
Prof. G.W. Becker (1979-1983)
Prof. H. Benoît (1977-1981)
Dr. H.H. Meyer (1979-1983)
Prof. C.G. Overberger (1977-1981)
Dr. A.J. de Vries (1977-1981)

National Representatives
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Hungary
Dr. P. Szewczyk (1979-1981)
Poland

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Dr. J.Y. Decroix
Dr. M. Fleissner
Dr. P.H. Geil
Mr. A. Ghijsels
Dr. G. Goldbach
Dr. J. Heijboer
Mr. P.B. Keating
Prof. A.S. Lodge
Prof. J. Meissner
Dr. A. Michel
Dr. H. Münstedt
Dr. A. Plochocki
Dr. W. Retting
Dr. S. Turner
Dr. A.K. van der Vegt
Dr. A.J. de Vries
Dr. J.L.S. Wales
Prof. J.L. White
Dr. H.H. Winter
Mr. J. Young

WORKING PARTY ON MOLECULAR CHARACTERIZATION OF COMMERCIAL POLYMERS

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Chairman

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Dr. W. Ball
Prof. H. Benoît
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Dr. R. de Bruille
Mr. F. Cane
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Dr. A. Cicuta
Dr. D. Constantin
Dr. H. Grande
Dr. R. Hammel
Dr. M. Hert
Dr. A. Holmström
Mr. N.L.J. Meyerink
Prof. B. Philipp
Dr. R. Prechner
Dr. F. Rott
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Dr. P. Starck
Dr. C. Strazielle
Dr. M. Unbehend
Dr. J.L. Vidal
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WORKING PARTY ON STRUCTURE AND PROPERTIES OF COMMERCIAL POLYMERS

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Chairman
Dr. M.E. Carrega
Secretary

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Dr. G. Böhm
Dr. C.B. Bucknall
Mr. J.M. Cann
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WORKING PARTY ON SUPPORTED POLYMER FILMS

Prof. L. Dulog
Chairman
Dr. J. Sickfeld
Secretary

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Dr. A. Berge
Dr. U. Biethan
Prof. D. Braun
Dr. M. Chiavarini
Mr. G. Christensen
Prof. D.T. Clark
Dr. G.P. Cunningham
Mr. P.H. Fink-Jensen
Mr. A. Fiorelli
Prof. W. Funke
Mr. M.A. Glaser
Prof. K. Hamann
Dr. Ch.M. Hansen
Dr. P. Janssen
Dr. S.M. Kambanis
Ir. M.F. Kooistra
Dr. H.J. Kretzschmar
Dr. J.A.W. van Laar
Dr. H.J. Luthardt
Prof. R.R. Myers
Dr. K.M. Oesterle
Dr. L.A. O'Neill
Prof. D. Pagani
Dr. J. Petit
Dr. P.E. Pierce
Mr. H.K. Raaschou Nielsen
Dr. D.H. Solomon
Dr. H. Spoor
Mr. A.R.H. Tawn
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Prof. G. Meyerhoff
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Dr. B.D. Phillips
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Prof. P. Rempp
Prof. S. Russo
Dr. Y.Y. Tan
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Dr. D.M. Soignet
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WORKING PARTY ON THERMAL PROPERTIES

Prof. G. Hinrichsen
Chairman

ANALYTICAL CHEMISTRY DIVISION (V)

(Established 1949)

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Prof. F. Pellerin (1975-1981)
Vice-President
Dr. J.C. White (1975-1983)
Secretary

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Prof. A. Hulanicki (1979-1983)
Prof. G.H. Morrison (1977-1981)
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Prof. Yu.A. Zolotov (1979-1983)

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Prof. H. Freiser
Dr. H. Hulpke
Prof. H. Malissa
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Prof. N. Tanaka

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(Established 1934)

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Chairman
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Secretary
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Dr. M. Pesez (1977-1981)
Prof. S.B. Savvin (1979-1983)
Dr. W.I. Stephen (1977-1981)
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Prof. F. Ingman (1979-1983)
Prof. A.T. Pilipenko (1977-1981)
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Prof. D. Thorburn Burns (1977-1981)

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Bulgaria
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Canada
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Japan
Dr. O.H.J. Christie (1979-1981)
Norway
Prof. R. Belcher (1979-1981)
United Kingdom

COMMISSION ON MICROCHEMICAL TECHNIQUES AND TRACE ANALYSIS (V.2)

(Established in its present form 1967)

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Chairman
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Secretary
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Dr. B. Griepink (1979-1983)
Prof. E. Jackwerth (1979-1983)
Prof. A. Mizuike (1973-1981)
Dr. Eugenia A. Terent'eva (1973-1981)

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Prof. S. Gomišček (1979-1983)
Prof. M. Grasserbauer (1979-1983)
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Dr. A. Lamotte (1979-1983)
Prof. Z. Marczenko (1977-1981)
Prof. G.H. Morrison (1977-1981)
Dr. J.M. Ottaway (1977-1981)
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(Established in its present form 1959)

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Yugoslavia

WORKING GROUPS OF COMMISSION ON OILS, FATS, AND DERIVATIVES

WG 2 - Determination of Total Oxidized Fatty Acids by TLC

M. Naudet (Chairman), J. Castang, D.G. Chobanov, A. Dieffenbacher , T. Hashimoto, B. Jacobsberg, A. Karleskind, É. Kurucz, C. Moxhet, W. Pocklington, J. Pokorný, H.J.Vos, J.P. Wolff, W. Zwierzykowski

WG 3 - Determination of Tocopherols (free and esterified) in Oils, Fats, and Margerine

P. Hendrikse (Chairman), J. Castang, N. Embree, J. Gracian Tous, A.R. Johnson, A. Karleskind, R. Ohlson, C. Paquot, J. Pokorný, F.B. Shorland, A. Solère, P. Vigneron

WG 4 - Determination of Chlorinated Pesticides in Oils and Fats (specially in lanoline)

G. Zwerenz (Chairman), T. Asahara, J. Castang, E. Fedeli, J. Gracian Tous, T. Hashimoto, C. Moxhet, J. Pokorný, A. Solère, H.H.R.H. Wendt, K.A. Williams

WG 5 - Determination of cis-cis Linoleic Acid Content of Oils, Fats, and Margerine

Ö. Levin (Chairman), J. Beare-Rogers, G. Hølmer, A.R. Johnson, É. Kurucz, A.T. Møller, R. Ohlson, H.J. Vos, K.A. Williams, J.P. Wolff, A.E. Waltking

WG 7 - Changes Taking Place in Oils and Fats during Deep Fat Frying

H. Wessels (Chairman), J. Beare-Rogers, H. Brüschweiler, J. Castang, A. Dieffenbacher, U. Engelrud, E. Fedeli, G. Hølmer, B. Jacobsberg, A. Karleskind, É. Kurucz, A.T. Møller, M. Naudet, R. Ohlson, M. Pattinson, J. Pokorný, A. Solère, P. Vigneron, A.E. Waltking, K.A. Williams

WG 8 - Identification and Determination of Emulsifiers (derived from fatty materials) in Oils, Fats, Fat Products, and Cosmetics
H. Brüschweiler (Chairman), T. Asahara, A. Dieffenbacher, U. Engelrud, D. Firestone, A. Karleskind, É. Kurucz, A.T. Møller, C. Moxhet, T. Nagai, W. Pocklington, J. Pokorný, R. Ohlson, A. Solère, M. Teupel, J.C. van der Weel, H.J. Vos, G. Warner, J.P. Wolff

WG 9 - Publication of Methods
A. Hautfenne (Chairman), P.R.E. Lewkowitsch, C. Paquot

WG 13 - Determination of Undesirable Plastic-based Contaminants (other than polyethylene) in Oils and Fats
Ö. Levin (Chairman), H. Brüschweiler, J. Castang, D. Firestone, É. Kurucz, J. Pokorný, H.H.R.H. Wendt, K.A. Williams, J.P. Wolff

WG 16 - Methods of Analysis for Glycerines
A.T. Møller (Chairman), H. Brüschweiler, U. Engelrud, A. Karleskind, M. Teupel, J.C. van der Weel, K.A. Williams

WG 17 - Methods of Analysis for Alkaline Soaps
H. Brüschweiler (Chairman), D. Firestone, J. Pokorný, M. Teupel, K.A. Williams, J.P. Wolff

WG 18 - Determination of Erucic Acid
H. Wessels (Chairman), J. Beare-Rogers, J. Castang, Dizier, J. Gracian Tous, A. Karabatur, É. Kurucz, A.T. Møller, R. Ohlson, W. Pocklington, J. Pokorný, A. Solère, P. Vigneron, H.J. Vos, J.P. Wolff

WG 1-78 -Identification and Determination of Industrial Lecithin Constituents
Ö. Levin (Chairman), J. Beare-Rogers, H. Brüschweiler, A. Dieffenbacher, G. Hølmer, V.M. Kapoulas, É. Kurucz, R. Lago, A.T. Møller, M. Naudet, R. Ohlson, J. Pokorný, A. Solère, H.J. Vos, A.E. Waltking, H.H.R.H. Wendt, K.A. Williams, J.P. Wolff

WG 2-78 - Determination of Solid Content of Fats by NMR Techniques
M. Naudet (Chairman), A. Dieffenbacher, Dizier, P. Hendrikse, É. Kurucz, J. Pokorný, H.J. Vos, K.A. Williams, G. Zwerenz

WG 3-78 - Determination of Polycyclic Aromatic Hydrocarbons Content of Fats
D. Firestone (Chairman), E. Fedeli, J. Graille, A. Hubbard, É. Kurucz, J. Pokorný, P. Vigneron, H.J. Vos, H.H.R.H. Wendt, J.P. Wolff

WG 1-79 - Determination of Erythrodiol in Grapeseed Oil
J. Gracian Tous (Chairman), J. Castang, E. Fedeli, A. Karleskind, A. Solère K.A. Williams, J.P. Wolff

WG 2-79 - Total and Quantitative Determination of Sterols
M. Naudet (Chairman), T. Asahara, J. Castang, E. Fedeli, J. Gracian Tous, P. Hendrikse, B. Jacobsberg, A. Karleskind, C. Moxhet, J. Pokorný, A. Solère, H.J. Vos, K.A. Williams, J.P. Wolff

WG 3-79 - Determination of Mineral Oil Residues in Oils and Fats
H.J. Vos (Chairman), Dizier, D. Firestone, P. Hendrikse, É. Kurucz, C. Moxhet, J. Pokorný, J.C. van der Weel, P. Vigneron, A. Visapää, H.H.R.H. Wendt, K.A. Williams, J.P. Wolff

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(Established in its present form 1979)

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Prof. G. Siest
Prof. D.B. Tonks

COMMISSION ON AUTOMATION (VII.1)

(Established 1967)

Titular Members
Prof. M. Hjelm (1973-1981)
Chairman
Dr. J. Bierens de Haan (1975-1983)
Prof. J. Büttner (1973-1981)
Dr. D.S. Young (1971-1981)

Associate Member
Prof. T.P. Whitehead (1975-1981)

COMMISSION ON QUANTITIES AND UNITS (VII.2)

(Established 1967)

Titular Members
Dr. R. Zender (1975-1983)
Chairman
Prof. R. Herrmann (1971-1981)
Dr. P. Lehmann (1979-1983)
Dr. C. Onkelinx (1975-1983)
Prof. O. Siggaard-Andersen (1975-1983)
Dr. B.F. Visser (1977-1981)

Associate Members
Prof. L.F. Bertello (1979-1983)
Dr. R. Dybkaer (1977-1981)
Dr. K. Jørgensen (1975-1983)
Prof. P. Métais (1975-1983)
Mr. J.C. Rigg (1977-1981)

COMMISSION ON TEACHING (VII.3)
(Established 1967)

Titular Members
Prof. D.H. Curnow (1973-1981)
Chairman
Dr. C.J. Porter (1975-1983)
Secretary
Dr. M.K. Schwartz (1975-1983)
Dr. H.J. Worth (1979-1983)
Dr. O. Zinder (1979-1983)

Associate Members
Prof. E. Concustell-Bas (1979-1983)
Dr. J.A. Corrêa (1977-1981)
Prof. B. Dastugue (1979-1983)
Prof. D. Doschev (1979-1983)
Prof. P. Lous (1977-1981)
Prof. V.V. Menshikov (1977-1981)
Prof. B. Strauss (1979-1983)

National Representative
Prof. M.M. Abdel Kader (1980-1981)
Arab Republic of Egypt

COMMISSION ON TOXICOLOGY (VII.4)
(Established 1973)

Titular Members
Prof. F.W. Sunderman, Jr. (1973-1981)
Chairman
Dr. S.S. Brown (1973-1981)
Vice-Chairman
Prof. J. Savory (1977-1981)
Secretary
Dr. M. Stoeppler (1979-1983)
Prof. D.B. Tonks (1977-1981)

Associate Members
Prof. S. Hernberg (1977-1981)
Dr. K. Kawai (1977-1981)
Prof. M.J.G. Mercier (1979-1983)
Prof. Mirna Mikač-Dević (1977-1981)
Dr. H.E. Spiegel (1974-1981)

National Representative
Dr. J. Borsy (1980-1981)
Hungary

Representative of IUPHAR Section on Toxicology
Dr. G. Zbinden

SUBCOMMITTEE ON ENVIRONMENTAL AND OCCUPATIONAL TOXICOLOGY OF NICKEL

Prof. F.W. Sunderman, Jr.
Chairman

Members
Dr. A. Aitio
Dr. R.T. Barton
Dr. R.C. Baselt
Prof. C. Boudène
Dr. S.S. Brown
Dr. A.J. Collings
Dr. A. Høgetveit
Dr. K.S. Kasprzak
Mr. S.G. Luxon
Dr. E. Mastromatteo
Dr. J. Meininger
Prof. Mirna Mikač-Dević
Dr. L. Morgan
Dr. E. Nieboer
Dr. S. Nomoto
Dr. T. Norseth
Dr. C. Onkelinx
Dr. A. Oskarsson
Mr. B.R. Roy
Dr. J. Sjöholm
Dr. M. Stoeppler
Dr. H. Zachariasen

SUBCOMMITTEE ON CHOLINESTERASES

Dr. S.S. Brown
Chairman

Members
Mr. P.F. Gibson
Prof. W. Kalow
Prof. W. Pilz
Dr. Mary Whittaker
Dr. C.L. Woronick

SUBCOMMITTEE ON ENVIRONMENTAL AND OCCUPATIONAL TOXICOLOGY OF CADMIUM

Dr. M. Stoeppler
Chairman
Dr. H.T. Delves
Secretary

Members
Prof. K. Aurandt
Prof. R. Bourdon
Dr. S.S. Brown
Dr. G.S. Fell
Prof. M. Geldmacher-V. Mallinckrodt
Prof. S. Gomišček
Dr. D. Gompertz
Dr. A. Harada
Dr. N. Hasegawa
Dr. R.F.M. Herber
Prof. Y. Kodama
Dr. V. Lagesson
Prof. R. Lauwerys
Prof. P. Lous
Prof. R.A.A. Maes
Prof. Mirna Mikač-Dević
Mr. H. Muntau
Dr. S. Nomoto
Mr. G.H. Pelletier
Prof. M. Piscator
Dr. S. Rubel
Mr. K.H. Schaller
Prof. Ch. Schlatter
Dr. P.B. Stockwell
Prof. F.W. Sunderman, Jr.
Prof. D.B. Tonks
Prof. K. Tsuchiya
Dr. V.B. Vouk

STANDING ORDERS OF EXECUTIVE COMMITTEE

CHEMRAWN COMMITTEE *

Composition and Terms of Office

(i) There shall be a standing CHEMRAWN Committee composed of a Chairman, a Secretary, and six other Members.

(ii) The President in consultation with the Executive Committee shall appoint Members. The CHEMRAWN Committee may propose names of persons suitably qualified for appointment.

(iii) The period of service of an ordinary Member shall be four years, renewable to a maximum of eight years.

(iv) The Membership shall be reviewed every two years by the incoming President in consultation with the Executive Committee.

(v) The President in consultation with the Executive Committee shall appoint the Chairman and the Secretary. The CHEMRAWN Committee may propose candidates.

(vi) The period of service of the Chairman and of the Secretary shall not exceed eight years. The sum of the years of service as an ordinary Member and as Chairman or Secretary shall not exceed ten years.

Terms of Reference

On behalf of the President and Executive Committee:

(i) to identify human needs amenable to solution through chemistry with particular attention to those areas of global or multinational interest,

(ii) to serve as an international body and forum for the gathering, discussion, advancement, and dissemination of chemical knowledge deemed useful for the improvement of man and his environment,

(iii) to serve as an international, nongovernmental source of advice for the benefit of governments and international agencies with respect to chemistry and its application to world needs,

and to be responsible for organizing IUPAC activity in these areas as approved by the President and Executive Committee.

* CHEMRAWN = Chemical Research Applied to World Needs

COMMITTEE ON CHEMISTRY AND INDUSTRY

Composition and Terms of Office

(i) There shall be a standing Committee on Chemistry and Industry composed of a Chairman, a Secretary, and a Member from each country or region having more than one Company Associate.

(ii) The President in consultation with the Executive Committee shall appoint the Chairman, the Secretary, and the Members. Candidates may be proposed by the Committee on Chemistry and Industry and by National Adhering Organizations having Company Associate programmes.

(iii) The period of service shall be four years, renewable for a further term of four years.

Terms of Reference

On behalf of the President and Executive Committee:

(i) To guide and inform Company Associates on IUPAC programmes and policies.

(ii) To establish important areas of chemical science in IUPAC related to ongoing industrial needs.

(iii) To put to industry enquiries on major chemical matters.

COMMITTEE ON PUBLICATIONS

Composition and Terms of Office

(i) There shall be a standing Committee on Publications composed of a Chairman, at least three and not more than six other Members, and the Scientific Editor of *Pure and Applied Chemistry*.

(ii) The President in consultation with the Executive Committee shall appoint Members. The Committee on Publications may propose names of persons suitably qualified for appointment.

(iii) The maximum period of service of ordinary Members shall be eight years.

(iv) The Membership shall be reviewed every two years by the incoming President in consultation with the Executive Committee.

(v) The President in consultation with the Executive Committee shall appoint the Chairman. The Committee on Publications may propose candidates.

(vi) The period of service of the Chairman shall not exceed eight years. The sum of years of service as an ordinary Member and as Chairman shall not exceed ten years.

Terms of Reference

(i) To advise the President and Executive Committee on all matters of publications including policy.

(ii) To make recommendations for decision by the President and/or Executive Committee.

COMMITTEE ON SCOPE

Composition and Terms of Office

(i) There shall be a standing Committee for SCOPE (ICSU Scientific Committee on Problems of the Environment) composed of a Chairman and not more than seven other Members.

(ii) The President in consultation with the Executive Committee shall appoint Members. The Committee for SCOPE may propose names of persons suitably qualified for appointment.

(iii) The maximum period of service of ordinary Members shall be eight years.

(iv) The Membership shall be reviewed every two years by the incoming President in consultation with the Executive Committee.

(v) The President in consultation with the Executive Committee shall appoint the Chairman. The Committee for SCOPE may propose candidates.

(vi) The Chairman of the Committee for SCOPE shall be the official representative of IUPAC on SCOPE. The period of service of the Chairman shall not exceed eight years. The sum of the years of service as an ordinary Member and as Chairman shall not exceed ten years.

Terms of Reference

(i) To advise the President and the Executive Committee on the programmes and policies of SCOPE.

(ii) Subject to the prior approval of the President and/or the Executive Committee, to carry out assignments agreed upon with SCOPE and to assist SCOPE generally in its activities.

COMMITTEE ON TEACHING OF CHEMISTRY

Composition and Terms of Office

(i) There shall be a standing Committee on Teaching of Chemistry composed of a Chairman, a Secretary, and six other Members.

(ii) The President in consultation with the Executive Committee shall appoint Members. The Committee on Teaching of Chemistry may propose names of persons suitably qualified for appointment.

(iii) The maximum period of service of ordinary Members shall be eight years.

(iv) The Membership shall be reviewed every two years by the incoming President in consultation with the Executive Committee.

(v) The President in consultation with the Executive Committee shall appoint the Chairman and the Secretary. The Committee on Teaching of Chemistry may propose candidates.

(vi) The period of service of the Chairman and of the Secretary shall not exceed eight years. The sum of the years of service as an ordinary Member and as Chairman or Secretary shall not exceed ten years.

Terms of Reference

(i) To advise the President and the Executive Committee on educational matters.

(ii) To coordinate the educational interests and activities of all IUPAC bodies.

(iii) To act as an informational and coordinating body for chemical education activities throughout the world and to establish a system of National Representatives as a channel of communication. To develop liaison with international organizations such as UNESCO and with national chemical societies or chemical education committees.

FINANCE COMMITTEE

Composition and Terms of Office

(i) There shall be a standing Finance Committee composed of five Members and a Chairman. In addition, the Treasurer shall be an *ex officio* Member but without voting power.

(ii) The President in consultation with the Executive Committee shall appoint Members. The Finance Committee may propose names of persons suitably qualified for appointment.

(iii) The maximum period of service of ordinary Members shall be eight years.

(iv) The Membership shall be reviewed every two years by the incoming President in consultation with the Executive Committee.

(v) The President in consultation with the Executive Committee shall appoint the Chairman. The Finance Committee may propose candidates.

(vi) The period of service of the Chairman shall not exceed eight years. The sum of the years of service as an ordinary Member and as Chairman shall not exceed ten years.

Terms of Reference

(i) To advise the President and the Executive Committee on financial matters.

(ii) To make recommendations for decision by the President and/or Executive Committee.

(iii) To review the IUPAC investment portfolio at least annually and make such changes as appear appropriate.

(iv) The Finance Committee shall not have executive functions except with respect to dealings in securities. The Finance Committee shall have executive authority with respect to selection, purchases, and sales of securities held by IUPAC, provided that the Treasurer and the IUPAC Banker concur with the decisions of the Finance Committee.

INTERDIVISIONAL COMMITTEE ON NOMENCLATURE AND SYMBOLS

Composition and Terms of Office

(i) There shall be a standing Interdivisional Committee on Nomenclature and Symbols (IDCNS), composed of a Chairman, a Vice-Chairman, a Secretary, the Scientific Editor of PAC, one Member and one Associate Member from each Division.

(ii) The President in consultation with the Executive Committee shall appoint the Members and Associate Members of the Divisions. The Interdivisional Committee, and the Division Presidents, may propose names of persons suitably qualified for appointment.

(iii) The period of service of Members and Associate Members shall be four years, renewable for a further term of four years.

(iv) The President in consultation with the Executive Committee shall appoint the Chairman, the Vice-Chairman, and the Secretary. The Interdivisional Committee may propose candidates.

(v) The period of service of the Chairman, the Vice-Chairman, and the Secretary shall be four years, renewable for a further term of four years. The sum of years as a Member or Associate Member and as Chairman, Vice-Chairman, or Secretary shall not exceed ten years.

(vi) The following organizations shall be invited to attend meetings of the Interdivisional Committee:

Bureau International des Poids et Mesures
International Organization for Standardization
International Union of Biochemistry
International Union of Nutritional Science
International Union of Pure and Applied Biophysics
International Union of Pure and Applied Physics

Terms of Reference

(i) To be responsible for submission to the Bureau/Council, in accordance with Bylaw 2.11, for publication or otherwise, any IUPAC document concerned with nomenclature and symbols.

(ii) Before recommending any material for publication as an IUPAC document, to ensure that the fullest possible consultations have taken place, and the widest possible consensus has been reached among all Divisions, Sections, Commissions, and other bodies of the Union, and between IUPAC and other ICSU bodies, the international standardizing organizations, and Conference Générale des Poids et Mesures (CGPM) and its Committees.

(iii) To ensure that any considered IUPAC view shall carry the fullest possible weight among other international organizations, all negotiations on matters concerned with nomenclature and symbols with

other ICSU bodies, with the international standardizing organizations, and with CGPM and its Committees, shall be conducted through the Interdivisional Committee, which shall advise the Executive Committee accordingly.

(iv) To be responsible, after consultations with all relevant bodies of IUPAC, for the official IUPAC comments on all documents on nomenclature and symbols sent to the Union for comment.

(v) To advise the President and Executive Committee on suitable persons for appointment as representatives of IUPAC on other bodies concerned with nomenclature and symbols.

IUB-IUPAC JOINT COMMISSION ON BIOCHEMICAL NOMENCLATURE

Composition and Terms of Office

(i) There shall be a standing IUB-IUPAC Joint Commission on Biochemical Nomenclature (JCBN) composed of eight Members, one of whom shall serve as Chairman and one as Secretary.

(ii) The Chairman and Secretary shall each be appointed for a term of three years by the Presidents of the two Unions, subject to whatever ratification is imposed by Union Statutes and Bylaws. JCBN may propose names of persons suitably qualified for appointment.

(iii) Four of the Members shall be appointed by IUB and four by IUPAC. One of the four IUB Members shall be an Officer of the IUB Committee of Editors of Biochemical Journals (CEBJ).

(iv) The Members appointed by IUB shall also be Members of the Nomenclature Committee of IUB (NC-IUB).

(v) Candidates for membership may be proposed by the Commission and shall be appointed by the respective Unions.

(vi) The periods of service of Members and the sum of the years of service as an ordinary Member and as Chairman or Secretary shall be in accordance with the Statutes and Bylaws of the appointing Union.

Terms of Reference

(i) To consider the nomenclature and symbolic representation of natural products and related compounds including synthetic analogues, and, where appropriate, to make recommendations in conformity with those issued by other nomenclature Commissions of IUB and IUPAC.

(ii) Before recommending any material for publication as an IUB-IUPAC document, to ensure that the fullest possible consultations have taken place and the widest possible consensus has been reached with the appropriate bodies of the two Unions. For IUPAC, these are the Interdivisional Committee on Nomenclature and Symbols (IDCNS), or, through IDCNS, the appropriate divisional nomenclature Commissions. For IUB, these are NC-IUB and CEBJ.

(iii) Approval to publish any material as an IUB-IUPAC document is to be obtained, in the case of IUPAC, from IDCNS, and, in the case of IUB, from the IUB Executive Committee.

(iv) The Commission shall normally hold an annual meeting, concurrently with NC-IUB, and with the approval of the President of IUPAC and the Executive Committee of IUB.

(v) The Commission shall be entitled to invite observers from other Commissions and experts in special fields to attend the meeting. The respective Executive Committees shall be asked in advance to defray any any expenses that would arise from such an invitation.

(vi) The continuation of JCBN will be reviewed by the Executive Committees of the two Unions in 1980.

IUB-IUPAB-IUPAC COMMISSION ON BIOTHERMODYNAMICS

Composition and Terms of Office

(i) There shall be a standing IUB-IUPAB-IUPAC Commission on Biothermodynamics composed of a Chairman, five other regular Members and up to six Associate Members.

(ii) Each Union, in consultation with the Commission, shall appoint two of the regular Members. The Commission shall appoint its Associate Members. The regular Members shall elect the Chairman from among themselves.

(iii) The initial period of appointment of regular Members shall be three years. Appointments shall be renewable for additional three-year terms up to a maximum of nine years.

(iv) The period of appointment of Associate Members shall be two years. Appointments of Associate Members shall be renewable for additional terms with no set limits.

Terms of Reference

(i) To advise the Unions on matters relating to the applications of thermodynamics in biology; in particular, to survey the status of research in this field, to promote the compilation and evaluation of relevant thermodynamic data and their correct presentation by thermodynamic functions, and to appraise the value of thermodynamic information for the development of biology.

(ii) To make recommendations on nomenclature in biothermodynamics and to formulate guidelines for the presentation of thermodynamic data relating to biological systems.

(iii) To initiate, sponsor, and organize meetings and conferences on biothermodynamic topics, both within the existing framework of the Union meetings and as independent activities. To act as a central source of information on meetings, workshops, and training courses dealing with research and education in biothermodynamics and to act as a means of coordinating and arranging such activities.

(iv) To encourage and participate actively in the preparation and publication of monographs in the field of biothermodynamics.

ALPHABETICAL INDEX TO MEMBERS OF IUPAC BODIES

(Where details of telephone are available, two sets of numbers are given in the majority of entries: the numbers in the first set are those to be dialled within the country, and those in the second set are the international numbers where the plus sign should be substituted by 010. The numbers in parenthesis at the end of each entry indicate the pages on which the memberships of IUPAC bodies for each individual will be found.)

ABDEL KADER, Prof. M. M., Department of Biochemistry, Faculty of Medicine, Cairo University, Kasr El-Ainy Street, Cairo, Arab Republic of Egypt (30, 35)

ABOU-EL-AZM, Prof. A., Academy of Scientific Research and Technology, 101 Kasr El-Ainy Street, Cairo, Arab Republic of Egypt (12)

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Interdivisional Committee on Nomenclature and Symbols (page 14)

International Union of Biochemistry
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International Organization for Standardization
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Commission on Electrochemistry (page 17)

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Commission on Equilibrium Data (page 28)

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SUMMARY REPORT
OF THE 30TH IUPAC GENERAL ASSEMBLY
2-10 SEPTEMBER 1979 IN DAVOS, SWITZERLAND

REPORT OF PRESIDENT SMETS ON THE STATE OF THE UNION

BIENNIAL REPORT OF THE TREASURER (1977&1978)

COMPARATIVE BALANCE SHEET, INCOME AND EXPENDITURE

REPORT OF THE 30TH MEETING OF COUNCIL

SUMMARY REPORTS OF IUPAC COMMISSIONS & COMMITTEES

STANDING COMMITTEES

I. PHYSICAL CHEMISTRY DIVISION

II. INORGANIC CHEMISTRY DIVISION

III. ORGANIC CHEMISTRY DIVISION

IV. MACROMOLECULAR DIVISION

V. ANALYTICAL CHEMISTRY DIVISION

VI. APPLIED CHEMISTRY DIVISION

VII. CLINICAL CHEMISTRY DIVISION

REPORT OF PRESIDENT ON STATE OF THE UNION

It is the statutory duty of the President to present to Council his biennial report on the state of the union. IUPAC is likely the largest scientific international union with its 6 major Divisions and one Section. Its objectives are multiple and varied; presently over 1000 experts who cover a broad spectrum of chemical and chemical related sciences and technologies are active in more than forty Commissions, Sub-Committees and Working Groups. These bodies are internationally accepted authorities in their field.

I want first of all in this report to stress that, if our Union has received since its 60 years existence broad international recognition its authority and prestige are entirely based on the dedicated services and voluntary cooperation of so many distinguished experts from all over the world, from industry as well as from universities, academies and scientific institutions. Their hard and voluntary work in our several Commissions and their services to the international community constitute the fundamental of the Union's activity and its "raison d'être".

Though it is out of the scope of the present report to review all this scientific work, we are deeply indebted to all of them. The international recognition of IUPAC's role in chemistry is also evident from the increaslingly large number of international symposia, colloquia and conferences whose organizers apply for IUPAC's sponsorship, though usually without receiving any financial support.IUPAC's sponsorship has indeed become a label of quality for the scientific level and international character of such meetings, and it can be said that IUPAC serves as a world wide forum for scientists in chemistry and chemical technology.

It will be the privilege of the Divisions and Sections Presidents and Chairman of IUPAC Committees to report directly to Council about their respective and much appreciated activities. This situation gives me the possibility to concentrate on a few items in which the Executive Committee and Bureau Members collaborate and assisted me since the General Assembly of Warsaw in 1977. During the past two years, the Executive Committee has met in Villefranche (March 1978), Brussels (September 1978) and Paris (April 1979), and the Bureau in Brussels. As your President I attended the 26th IUPAC Congress in Tokyo (September 1977), the international Colloquium of the CNRS on Images de la Chimie in Mulhouse (June 1978), the first Chemrawn Conference of Organic Raw Materials in Toronto (July 1978), the celebration of the 75th anniversary of the Real Sociedad Espanola de Fisica y Quimica (October 1978) and I will attend the 27th Congress in Helsinki.

The general problems and considerations I will present you result mainly from exchange of ideas and suggestions with the members of the Executive Committee and Bureau; some comments however have a more personal character and result from a long IUPAC experience.

I will consider successively the internal structure and organization of our Union, then the relations of IUPAC with external organizations. As already stated by Professor Benard in his presidential report (1973) the existing structure of the Union is that prevailing when the Union was founded 60 years ago, and corresponds to the main classical division of chemistry, namely Inorganic, Organic, Physical Chemistry, Analytical and Applied Chemistry. This classical subdivision results in a very rigid and formal structure which does not correspond anymore to the actual interdisciplinary character of modern science, particularly of chemistry. Undoubtedly interdivisional activities will have to be considered increasingly in the near future, and the present framework of IUPAC is too rigid and lacks the ability to undetake quickly any new problems arising. On the other hand the great size of the Union makes its direction more laborious and makes stronger internal collaboration indispensable. In order to remedy partially to this situation and adapt our present structure to the fast evolution of science., is my personal conviction that first of all better liaision and direct contacts between Officers of Section/Divisions or even Officers of Commissions and those of the Union are required and should be strongly enhanced. Only by exchange of ideas

and personal interaction can the Union Officers become aware of existing problems or newly created situations.

In this respect I consider the annual meeting of Section/Division Presidents with the Union Officers as a very minimum; it should be supplemented by direct contacts from which a general policy for the future of IUPAC can be framed and new activities initiated. Moreover the existence of such direct contacts would avoid any unnecessary slow down of the work caused by administrative procedures, accelerate the solution of problems of non-administrative nature, and avoid sometimes misunderstandings. Once this intimate collaboration established between Union Officers, Divisions/Section,Committees and Commission Officers, it would be possible to increase interdivisional activities e.g. Commissions where expertsof different disciplines could easily collaborate, as it is already the case in the interdivisional Committee on Nomenclature and Symbols (IDCNS) and in the actual Commission on Photochemistry III.3. Another, possibly more flexible, solution could be the creation of interdivisional task groups with a given objective and whose term and ressources are well specified.

A second problem of internal structure of the Union concerns the problems of Applied Chemistry. It seems to me that the progressive amalgamation of academy and industry in many of our Commissions is highly desirable; it would meet some criticism and questions about the utility of IUPAC for industry especially when the economic situation is depressive In my opinion it is in the relatively young Macromolecular Division created in 1967 and in which I had the pleasure to collaborate actively with distinguished colleagues and friends, that academic science and its application to practice are most successfully combined. In Commission IV.2 on Polymer Characterization and Properties under the dynamic leadership of Dr. J. Barrett a very great majority of experts of industry collaborate for the study of the molecular characteristics and structure properties relations of commercial polymers in three different working parties. If such interrelationship academy/industry would increase in most Divisions and Commissions it would surely increase the interest of our company associates and favour the cooperation between the newly created Standing Committee on Chemistry and Industry (COCI) and IUPAC-bodies. It should in no means affect the activity of our Applied Chemistry Division, but largely increase interdisciplinary actions, which nowadays correspond to the actual trends of chemistry.

It is in order to stabilize within IUPAC contacts industry/academy and favour their cross-fertilization that a Standing Committee on Chemistry and Industry (COCI) was created. In effect, COCI formalizes the situation whereby the International Company Associate Group (ICAG) operated since 1973 in an informal manner. Its terms of reference are to inform the Company Associates on IUPAC-programs, to put to industry inquiries on major chemical matters, and to establish important areas of chemical science related to ongoing industrial needs. COCI held its inaugural and promiseful meeting in February 1979 in Leverkusen (FRG) under the dynamic chairmanship of Professor K. Buchel.

From the point of view of the organizational structure of IUPAC a proposal from the US National Committee for IUPAC was introduced to the Bureau in 1978 by professor C.G. Overberger. In fact this proposal originated in a suggestion of Professor Glenn Seaborg, then President of the American Society 1976, for the creation of an international chemical society. Among the different proposals for increasing international cooperation between chemists, one proposal which was endorsed by the U.S. National Committee involves a structural modification of our Union. In order to promote closer ties between individual chemists all over the world, it proposes Divisional membership of the Union by external individual on payment of an annual subscription. This would entitle them to obtain our new News Journal at reduced rate as well as to participate to all International IUPAC sponsored Symposia at reduced registration fees. Appropriate changes to the IUPAC statutes and bylaws would be necessary if the proposal is implemented on a permanent basis. This proposal was discussed by the Bureau in Brussels; divergent views were expressed concerning its practicability, its opportunity as well as the procedure to be followed. A revised proposal, included in the papers for Council, has been sent in advance for consideration to all Section/Division Presidents and will be rediscussed at their meeting in Davos as well as by the Bureau. I do hope that the new proposal will have the support from at least one Division to undertake an experimental evaluation of its effectiveness.

A last aspect of internal structure of the Union concerns the present policy for all IUPAC bodies to meet at the biennial General Assembly. In view of increasing financial costs to the Union, greater commitment for the host country, high organizational workload for the secretariat and heavy pressure on several participants for a 10-day schedule, the Executive Secretariat was asked to prepare a document on the effects of introducing a minimum schedule for the General Assembly; this document was circulated to the Division/Section Presidents. These colleagues concluded unanimously that a reduced schedule Assembly would damage seriously the vital functions and character of IUPAC, particularly the possibilities for Commissions to interact with Division Committees and each other and also to have access

to the Officers and permanent staff of the Union. They have suggested ways and means to effect economies and minimize costs, e.g. - reduction in the number of Titular Members of Commissions - reduction of IUPAC financial support for travel expenses and/or subsistence, for Titular Members - reduction in frequency of the General Assembly.

These resolution and suggestions were circulated to National Adhering Organizations of IUPAC but only with poor response. Therefore the Executive Committee decided to propose to Officers of Commissions and Divisions a voluntary reduction of membership of Commission and eventually of Divisions, and organization of their meetings in conjunction with scientific symposia in non-General Assembly years. In my personal opinion if financial restrictions command reduction of commission titular membership, the number of associate members should be uncoupled from that of titular members; it would be even wiser to increase the number of associates. Reduction in frequency of the Assembly could seriously affect the proper functioning of a Union as large as IUPAC and on the long run endanger its unity.

Leaving problems of internal structure and organization, priority matters are of course the finances and the publications of the Union. Concerning finances, the major income of IUPAC are annual fees of the National Adhering Organizations, funds raised from Company Associates and some external financial support that I will consider later. At the risk of being contradicted soon by our Treasurer Professor Horn, to whom I like to express my great estime, IUPAC is in good shape and health thanks to his financial skill and perseverance. We are also indebted to the chairman of our Finance Committee, Professor Bjorkmann, and to his colleagues for their great activity, for wise advices and recommendations to the Executive Committee.Both colleagues will report directly to Council.

Publication matter is very important for IUPAC because it should reflect for outside IUPAC's Divisions and Commission activities by publishing reports and recommendations. On the other hand, through the symposia and colloquia on which it grants sponsorship, IUPAC benefits more than any other organization from an extraordinary list of first class lecturers and scientists in all fields of chemistry. Since the last General Assembly, the structure of IUPAC publications has been completely reorganized under the competent chairmanship of Dr. H. Grünewald in collaboration with our active Secretary General, Professor Ourisson, who was himself former chairman of the Publications Committee. Pergamon Press accepted to take over the work and became official publisher. Besides Pure and Applied Chemistry and the reshaped IUPAC-Bulletin, the creation of a new IUPAC-News Journal was decided and Dr. M. Gellender appointed as its full-time editor and information Officer of the Union. Publication has been often matter of discussions in the Executive Committee. I will leave it to the chairman of the Committee to report to Council about the actual situation of this very important problem for our Union.

An initiative interesting for the future of IUPAC was taken a few years ago by Sir Harold Thompson in encouraging young highly competent chemists to participate in various IUPAC activities, mainly by attending as guests the meeting of some very active Commissions. This UK-concept was already joined by the US National Committee Awardees program, and in a near future by a few other adhering organizations. It is understood that a country selects its own candidates, and pays their travel/living expenses and that approval of the chairman of the appropriate Commission is requested in advance.It is evident that such program is highly beneficial for the entire IUPAC-organization, and could provide a pool of young scientists interested for future services to IUPAC. The Executive Committee expresses the hope it will be possible for National Adhering Organizations to continue their efforts to support such program in future years.

At this stage I should like to raise a delicate question concerning the possibility for the Union to add some new proposals or projects on its program in spite of the actual financial difficulties. As stated in the report of the subcommittee on New Projects of the Applied Chemistry Division, if the Union maintains a dynamic and responsive approach in the development of its program, new projects must be added from time to time, as far as some basic criteria are met. The adoption of new proposals as well as the continuation of established activities must evidently compete for support with many other demands taking account of the limited ressources of the Union. It is well known that it is much more difficult to discontinue existing activities than to start with new ones.

I am personally convinced that IUPAC has sufficient financial reserves to undertake and fund worthwhile new activities at least on a temporary basis. If new projects are really important but need more support that the Union can provide, the promotors should be encouraged to look for outside financial support, this sollicitation of external funds being conducted in close connection and agreement with the governing bodies of the Union. Keeping these general principles in mind, one could easily conceive interdivisional commissions or preferentially task groups on catalysis, chemical kinetics, radiation chemistry, marine chemistry etc.

Let us now consider IUPAC from outside of the Union and in its relations with other unions, organizations and agencies. During 1978, twenty seven symposia were sponsored by the Union in various member countries. This activity has for the Union a very great significance because it constitutes one of the main links between all chemists and related scientists from every country of the world. Among these symposia, special mention should undoubtedly be made of the first World Conference on Future Sources of Organic Raw Materials (Toronto, Canada) which constituted the first project of the IUPAC programme on Chemical Research Applied to World Needs. Council members will remember this ambitious initiative of the US National Committee which was presented to Council in Madrid in 1975 by its first initiator, our distinguished colleague Prof. C.G. Overberger. As president of the Union I had the opportunity to assist at Chemrawn I which was indeed an outstanding success thanks to the able and tireless activity of Dr. W. Schneider and its Organizing Committee. The Organizing Committee and attendees included not only internationally recognized technical experts but also board chairman, presidents and research directors from the industry, advisors to top governmental officials, world banking leaders, in other words decision makers. The purpose of the conference was to define and set in perspective those factors that will ultimately determine the sources of organic raw materials necessary to supply world chemical industry at the end of this century. Plans already exist for a follow-up of Chemrawn I to ensure continuing interest and action in future sources of organic materials, while the next Chemrawn World Conference will treat of chemistry, agriculture and world food supplies. Dr. Bryant W. Rossiter, the very active and dedicated chairman of our Chemrawn planning committee, will report later to Council.

A political problem which has been considered many times by the Executive Committee and concerns us very much is the possible membership within the Union of the People's Republic of China. A memorandum on that problem was sent in advance to all adhering organizations, and in agreement with the decision of our Executive Committee, this General Assembly has to be consulted. Meanwhile by a joint letter to our Secretary General, Mr. Liu Ta-king Vice-President of the Chinese Chemical Society and Mr. Chen Zi-Xin, Vice-President and Secretary General of the Chemical Industry and Engineering Society of China informed us that the Chinese Chemical Society will be the National Adhering Organization of the People's Republic of China in IUPAC, and that both societies will jointly participate in IUPAC activities as soon as the transfer of representation is put into practice. The Chinese Chemical Society has also decided to send five chemists to our Union's Congress in Helsinki end of August, and possibly observers at this General Assembly. We received also the assurance that the chemists located in Taiwan would be allowed to continue their participation in the Union's activities as individuals. It is evident that everyone would be glad if our Chinese colleagues would join us; it would also correspond to the principle of universality of science.

Concerning our contract work with the European Economic Community, Council Members will recall that during 1966-76 IUPAC has had several official contracts with the CEE thanks to that active and competent intermediacy of professor R. Truhaut, who was for many years the chairman of the CCAM-Committee. The Purpose of these contracts was to provide expert advice on analytical methods for control of the purity criteria of food additives. All contracts have been completed by IUPAC however without reaction from CEE,and at the request of the Executive Committee the President and the Executive Secretary, Dr. Williams, met CEE officals in Brussels to discuss this matter and examine possible further contracts between the two organizations. For immediate future no further contracts are possible on analytical methods for food additives because the very small staff capacity in that CEE Directorate. Many other suggestions for collaboration were discussed and further reported to Section/ Division Presidents to examine their possible interests for new collaborative work with CEE. Provisionally the coordinating committee was dissolved at the 39th Bureau meeting.

Close contacts with the International Council of Scientific Unions (ICSU) have been maintained. Your President was your representative on the General Committee of ICSU and assisted to its meetings in Athens (1978) and Brussels (1979); he is also member of its sub-committee of Scientific Priorities, and member of the ad hoc group concerning the structure of ICSU. It is my strong believe that IUPAC has to participate actively to the various ICSU Committees, where interdisciplinarity prevails and where chemistry has an important role to play but has been too often neglected. Dr. Harold Egan, former President of our Applied Chemistry Division, is our official and very active delegate to the Scientific Committee on Problems of the Environment (SCOPE) and was recently elected member of its executive committee. He will also be our representative at the scientific group on methodologies for the safety evaluation of chemicals (SGMSEC) depending jointly from WHO and SCOPE. Dr. A.F. Langlykke, Vice-President of the same Applied Chemistry Division is our official representative on the recently created (1976) Scientific Committee on Genetic Experimentation (COGENE). Prof. C. Pannamperuma on the Committee on Space Research (COSPAR) Prof. E. Pearson on the Committee on Water Research (COWAR) Dr. R. Jones on the Committee on Data for Science and Technology (CODATA) Dr. C.N. Rao on the Committee on the Teaching of Science Dr. J. Barrett on the ICSU Abstracting Board.

Dr. E.I. Hamilton will assure liaison with the Scientific Committee on Oceanic Research (SCOR). Through ICSU, IUPAC receives a share of its subvention from UNESCO. Up to now, Scientific Unions received traditionally a support depending on their size. Since the number of Unions affiliated to ICSU has increased exagerately, the system of allocation of the Unesco subvention was changed and, beginning of 1980, one half of the relatively modest Unesco subvention will be divided equally among the international scientific unions and the other half will be available for use of Commissions and Committees and for special projects of the Union. By introducing special projects to ICSU for consideration of funding a small increase of global allocation has been assured; it is however largely insufficient for realization of IUPAC's projects. It should also be emphasized that ICSU has created an ad hoc group on energy and agreed to organize at its next General Conference in Amsterdam (1980) a one-day multidisciplinary colloquium on research and research requirements in the domain of non-conventional energy. These problems, strongly related to those of Chemrawn I, are also relevant to Unesco and could be considered for substantial subvention in Unesco's long range programs.

We are indebted to Unesco for its support to the Union especially in the domain of teaching of chemistry. Mention should be made of the Unesco contract with our Committee on the Teaching of Chemistry as well as its financial support for newsletters in chemical education. Joint Unesco/IUPAC sponsorship was also effective in the organization of international congresses on teaching of chemistry during the last years. Though cooperation with intergovernmental organizations seems questionable to some colleagues, I believe that such collaboration affords for IUPAC possibilities of expanding its activities in new domains of chemistry which are unaccessible on its own means, but which correspond to the evolution of science.

As to our relation with our sister unions, I want only to mention the activities of the joint IUB-IUPAC Commission on Biochemical Nomenclature which is attached to IDNCS and of the IUB-IUPAB-IUPAC Commission on Biothermodynamics attached to the Physical Chemistry Division. Good mutual relations with the Federation of European Chemical Societies (FECS) should also be underlined, and further increased.

All these considerations I had the honour to present you on the evolution of our Union during the past two years and its near future must be completed by the expression of the Union's gratitude to all of you who did participate to its various activities.

It is not possible for me to mention those who will retire this year from their work within the Union; I thank them all collectively very cordially and do hope they will further support our efforts of international cooperation. I must nevertheless mention a few special cases, and first of all our Treasurer Prof. O. Horn, who deserves our greatest gratitude for his personal strength, financial skill and tireless activity throughout his long period of services. By keeping down the general expenses but nevertheless allotting to the Divisions and Sections their own budget he was able to keep the financial situation on a firm and healthy base;I ask the Council to join me in extending to him our sincere appreciation. To Dr. Cairns, our Past-President, I reiterate my very sincere thanks for his good advices, based on a broad experience and deep knowledge of management and international affairs. To Sir Derek Barton, who decided to leave IUPAC after so many years of distinguished service, I want to express our deepest appreciation. In spite of his extraordinary scientific activity, he was always ready to help us by his judicious advice. Besides my personal thanks and the expression of my highest scientific estime, I present him our best wishes for his further scientific career. To Academician professor N. Emanuel I express the high appreciation of all Executive Committee and Bureau Members for his friendly and constructive cooperation. Though he has to leave the governing bodies of IUPAC at the conclusion of this Council meeting, we hope that in his capacity of chairman of the National Committee of Soviet chemists he will maintain close contacts, and assure further collaboration between the URSS Academy of Sciences and our Union.

I am also personally indebted to my fellow Officers and the other Members of the Executive Committee and Bureau for their kind and active collaboration which has made our meetings during these two years a rewarding pleasure.

I am particularly indebted to professor Guy Ourisson, our very active Secretary General, for his frequent, always friendly and competent collaboration, which facilitated so considerably my task; to our Executive Secretary, Dr. Williams, and the staff members of the Secretariat, for their ability and devotion in taking care of everyday's problems, in the preparation of our Assembly and meetings and in running our publications. Prof. H. Zollinger assumes office as President of IUPAC at the conclusion of this Council Meeting. He has worked for many years for IUPAC; he has been President of the Organic Division, Chairman of the Commission on Physical Organic Chemistry and is Member of our Chemrawn Planning Committee. His deep knowledge of IUPAC affairs and his recent professional career

as rector of the E.T.H. Zürich are guarantees for his Presidentship. We wish him outstanding success, and with the cooperation of all Members, full prosperity of IUPAC.

G. SMETS

20 July 1979 President.

BIENNIAL REPORT OF THE TREASURER 1977/78

When I prepared my first biennial report for the years 1971/2, I introduced it with the words: 'The happy days when the income of IUPAC was higher than the expenses are unfortunately over.' My last biennial report would have had a similar opening if it had not been for several fortunate circumstances providing a surplus on the accounts for this 2-year period. That the true situation is not as rosy as it appears on the surface is clearly apparent from the fact that the 1979/80 budget is burdened with a deficit of $ 86 100, but this can be offset by the 1978 surplus. The budget for the 1981/82 period on the other hand looks far more unhealthy because there will no longer be a surplus to counterbalance the deficit.

I took over the office of treasurer at the IUPAC Conference in Washington in 1971 with a deficit of $50 300 and present my final report with a surplus of $109 664. This sounds better than it actually is, because the forecast in Madrid more or less suggested that there would be a deficit for 1977/78. The fact that this is not so is due both to the thriftiness of the Division Presidents and the higher subscriptions paid by most of the National Bodies, as well as to the higher income from our investments and our publications. The income from the subscriptions of the Company Associates has unfortunately remained the same for years. It regrettably falls to the Treasurer yet again to mention that some countries are still not paying the subscriptions they should in view of their chemicals sales. Some time ago the Treasurer pointed out that, with the resources at its disposal, IUPAC will not be able to continue its past activities unless there is some degree of tightening up or reorganization. Let us try to find a less costly means of holding our General Assembly, for instance by staying on a university campus rather than in city hotels. As Treasurer I must ask the members of the Divisions and Commissions to make use of resources outside the IUPAC, which, I am glad to say, is already happening in some areas. May I just remind you that not so long ago the maximum travel and subsistence was $400. We cannot expect a few countries to go on indefinitely making contributions which far exceed their withdrawals, so that they alone bear the administration expenses for instance. The financial burden should be relatively evenly distributed. In addition, because of inflation, subscriptions will have to be increased.

The 1977 surplus of $ 45 041 was successfully increased to $ 109 664 in 1978 as a result of the subscriptions increase decided upon in 1977, and the higher returns on our investments. The profits from our publications, amounting to $ 25 566, also made an important contribution in 1978. However, the 1978 surplus would have been lower if in the course of 1978 the Divisions had already called in the funds that had been put at their disposal.

The first World Conference on Future Sources of Organic Raw Material held in Toronto in July 1978, which was the first project in the IUPAC programme for Chemical Research Applied to World Needs (CHEMRAWN) was not only successful, it also yielded a financial surplus. It enabled us a pay back the seed money that was owing - $ 5000 - and stil have a surplus of about $ 22 000. This sum has been set aside to finance future conferences of a similar nature.

The fact that at the end of 1977 we had a surplus of $ 45 041 despite the 29th General Assembly, which was held in Warsaw from 12-21.8.1977, is due largely to the tremendous hospitality of the Polish National Committee and the Polish Academy of the Sciences, who took great pains and went to considerable expense to ensure that the conference went off smoothly and successfully. We are very grateful to both organizations. It was an excellent conference. Whereas the 28th conference in Madrid cost $ 193 094, the costs in Warsaw, amounting to $ 177 751, remained below those of the 28th General Assembly, thanks to the support of the Polish National Committee. As the cost of the 30th General Assembly in Davos from 2-10 September 1979 is estimated at $ 270 000, the Treasurer had to take care to ensure that the necessary funds were available, especially as he sent the delegates the money early on and quite a few countries only pay at a later date or not until next year. He had temporarily to hold back funds, but released them on receipt of satisfactory information concerning Davos.

We are also indebted to the International Council of Scientific Unions (ICSU) for a subsidy of $ 16 000 dollars in both 1977 and 1978, the Comité National Francais de la Chimie, Hoechst AG - which for 8 years bore the costs of the Treasurer's office - and Dr. M. Williams, Miss A Troughton and their colleagues at the secretariat in Oxford. We are also deeply grateful to Mr. Th. Fehr of the Union Bank of Switzerland in Zurich for the valuable assistance and advice he has so willingly given us on our financial matters. We would also like to express our appreciation to the Finance Committee headed by Professor A. Björkman which has worked untiringly to improve IUPAC's financial situation and has made various proposals to this end.

As in the past, mention should be made of the good cooperation between the President Professor Smets, the Executive Committee, the secretariat and the Division Presidents and the members of the bureau. I want also to thank all members of committees and commissions for the understanding they have shown if occasionally I have been forced not to agree in full with their financial request. However, this has always and only been done for the benefit of our Union.

In the annex the financial results are shown in the income-and expenditure-accounts, the balance sheet and the reports of our auditors Neutra Treuhand, Zurich.

Throughout the 8 years that I have held office of Treasurer of IUPAC I have found it a pleasure and never a burden and I hope that my successor, who will be your Treasurer as from 1 January 1980, will obtain the same enjoyment from the post.

O. HORN.

COMPARATIVE BALANCE SHEET AS OF DECEMBER 1977 AND 1978
(EXPRESSED IN US DOLLARS)

ASSETS	1977		1978	
Cash in Bank				
US Dollars	22'550.11		40'889.64	
Sterling	19'825.--		17'343.--	
Swiss Francs	9'285.--		1'514.--	
German Marks	5'687.--		6'932.--	
Short Term Deposits	105'000.--	162'347.11	205'000.--	271'678.64
Marketable Securities (at cost)		459'205.69		460'663.69
Transitory Assets		1'355.--		1'892.--
Subsciptions due				
National Organizations	9'300.--		6'670.--	
Company Associates	-.--	9'300.--	15'800.--	22'470.--
	US$	632'207.80	US$	756'704.33

LIABILITIES	1977	1978
Capital Account	534'308.17	579'349.90
Transitory Liabilities	42'139.--	62'208.--
Contracts Account	10'718.90	5'481.50
Excess of Income over Expenditure	45'041.73	109'664.93
	US$ 632'207.80	US$ 756'704.33

COMPARATIVE STATEMENT OF GENERAL INCOME AND EXPENDITURE
INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY
YEARS ENDED 31 DECEMBER 1977 AND 1978
EXPRESSED IN US DOLLARS

INCOME	1977		1978	
Subscriptions National Organizations				
Current Year	177'417.--		210'109.--	
Outstanding	9'300.--	186'717.--	6'670.--	216'779.--
Subscriptions Company Associates				
Current Year	60'293.--		49'334.--	
Outstanding	-.--	60'293.--	15'800.--	65'134.--
Interest and Dividends earned		37'343.55		53'262.99
Other Income				
Transfer from Contracts Account	4'096.90		9'499.74	
Transfer from Publ. Account	13'008.72		25'567.41	
Refund of Contrib. to Symposia	-.--	17'105.62	5'000.--	40'067.15
Exchange Differences		2'225.09		3'313.94
Subvention from UNESCO/ICSU		16'000.--		16'000.--
Last year's Provision for Committed Expenditures		31'321.--		14'345.--
	US$	351'005.26	US$	408'902.08

EXPENDITURE	1977		1978	
Subscriptions National Organizations				
Written off		3'500.--		-.--
Office Expenses				
General Office and Divisions	8'145.16		9'913.36	
Office Secretary General	1'526.--		-.--	
Secretariat Oxford	50'617.50		60'273.--	
Audit,Bank Fees, other charges	15'214.87	75'503.53	17'875.20	88'061.56
Travel and Subsistence Allowances				
Meetings other than Gen.Assembly	29'934.90		141'605.24	
Warsaw General Assembly	177'751.70	207'686.60	7'551.35	149'156.59
Contribution to Symposia		-.--		4'000.--
Other Expenses				
Contribution to ICSU	4'928.40		5'095.--	
Free Info Bull.& Comptes Rendus	-.--	4'928.40	10'345.--	15'440.--
Committed Expenditures		14'345.--		42'579.--
Excess of Income over Expenditure		45'041.73		109'664.93
	US$	351'005.26	US$	408'902.08

COMPARATIVE STATEMENT OF PUBLICATION INCOME AND EXPENDITURE
INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY
YEARS ENDED 31 DECEMBER 1977 AND 1978
EXPRESSED IN US DOLLARS

INCOME	1977		1978	
Publications				
Pergamon	48'075.59		60'936.--	
Butterworths	200.--		157.--	
Elsevier	103.--		77.--	
Secretariat	1'153.--		460.--	
Miscellaneous	38.70	49'570.29	418.49	62'048.49
Free Inf. Bulletins and Comptes Rendus		-.--		10'345.--
Purchases Pergamon from IUPAC		819.77		999.--
Contributions to Revision of Nomenclature of Organic Chemistry		2'000.--		-.--
Last year's Provision for Committed Expenditures		27'794.--		27'794.--
	US$	80'184.06	US$	101'186.49

EXPENDITURE	1977		1978	
Scientific Editors		1'614.--		4'930.--
Info Officer, Ass.Secr. & Typist		14'620.--		19'975.--
Purchases Secretariat from Pergamon		666.22		668.--
Subscriptions for Info. Bulletin		708.34		-.--
Inf. Bulletin		-.--		3'568.--
Comptes Rendus		-.--		6'777.--
Share of Secretariat Costs		15'767.--		19'872.--
Contributions to Revision of Nomenclature of Organic Chemistry		1'593.10		-.--
Royalties Thermodynamic Tables Project		1'390.13		897.58
Prov. Nomenclature Recommendations		2'782.--		-.--
Miscellaneous Expenditure		240.55		1'482.50
Committed Expenditures		27'794.--		17'449.--
Excess of Income over Expenditure		13'008.72		25'567.41
	US$	80'184.06	US$	101'186.49

COMPARATIVE STATEMENT OF CONTRACTS INCOME AND EXPENDITURE

INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY
YEARS ENDED DECEMBER 31 1977 AND 1978

INCOME	1977	1978
UNESCO Contracts	17'300.--	5'500.--
CEE Contracts	3'203.--	3'260.34
Balance from last year	4'301.30	10'718.90
	US$ 24'804.30	US$ 19'479.24

EXPENDITURES	1977	1978
UNESCO Contracts	9'789.50	3'677.--
CEE Contracts	199.--	821.--
Transfer to General Purpose a/c	4'096.90	9'499.74
Balance to next year	10'718.90	5'481.50
	US$ 24'804.30	US$ 19'479.24

MINUTES OF THE 30TH MEETING OF COUNCIL

9-10 September 1979

Present: Prof. G. Smets (President, in the chair), Members of Bureau, Delegates of National Adhering Organizations, Observers from Associated Organizations.

STATUTORY REPORT OF PRESIDENT ON STATE OF THE UNION

In presenting the report to Council, Prof. Smets emphasized that:

- The present framework of the Union was too rigid and lacked the ability of undertaking quickly any new problems arising

- the newly created Committee on Chemistry and Industry (COCI) would hopefully improve within IUPAC contacts between academy and industry and favour their crossfertilization

- a good response was necessary to suggestions for effecting economies and minimizing costs of IUPAC activities in order to preserve the existing format for the biennial General Assembly

- National Adhering Organizations should continue their effors to support participation of younger chemists as observers at meetings of IUPAC bodies

- close contacts had been established with ICSU and UNESCO, but initiatives were needed from the Divisions of the Union to renew the contract work with CEE

BIENNIAL REPORT OF TREASURER

The report of the Treasurer and the audited accounts for 1977-8 had been circulated before the meeting. Contrary to expectations there was an excess of income over expenditure of US - $45 041.73 in 1977 and of US - $109 664.93 in 1978. However, the forward budgets showed a deteriorating situation.

Prof. O. Horn reiterated his earlier conviction that, with the resources at its disposal, the Union would not be able to continue the past level of activities unless there was some degree of tightening up or reorganization. More use by IUPAC bodies of external sources of funding was advocated.

REPORT OF FINANCE COMMITTEE

Prof. A. Björkman stressed that during 1978 assets had markedly surpassed the guideline of being equivalent to two years expenditure of the Union. Nevertheless, there was an urgent need for increased future income if existing and new activities were to be sustained: the situation was aggravated by continuing worldwide inflation and increased costs. The

Finance Committee was convinced that a revised dues structure was essential. It was his personal conviction that a large and important international scientific union like IUPAC ought to have more long range planning.

TENTATIVE BUDGETS FOR 1980 and 1981

The budgets (as of 6th Sept. 79) were introduced to Council on behalf of the Bureau by Prof. Björkman An overall deficit of US - $11 000 anticipated for 1980 would be converted to a balance if half of the extra income from the proposed 10% increase in national subscriptions was forthcoming in the first year.

In view of the authoritative, broad and valuable nature of many IUPAC titles, the UK Delegation enquired why a deficit was forecast for the Publications Budget. The Secretary General reported that the Publications Committee agreed the Union's publications should be more profitable and had challenged Pergamon to double the circulation of the journal Pure and Applied Chemistry. The assistance of all members of IUPAC bodies was needed with positive propaganda: the quality of the issues was excellent and both rapid and regular publication was now being achieved. The Executive Secretary said that total royalties expected for 1979 (payable in 1980) were US - $ 75 000, but there would be a deduction of about US - $20 000 in respect of advance compilation fees for the solubility data and stability constants projects. Also, IUPAC had agreed to subsidize for a three-year trial period the editorial costs of Chemistry International while the subscription income was built up by Pergamon.

Prof. Björkman pointed out that the new basic dues policy introduced at Washington in 1971 had led to some bad consequences for the Union. Most countries in the higher membership categories were counting Company Associate income as part of the national subscription. Also and regretably, the basic unit for a Company Associate had been left at US - $250 for 13 years. The US Delegation was anxious that assets must be sold to overcome a deficit. Balanced budgets should be the aim as soon as possible. This view was shared by the UK Delegation, which pointed out that the allowance for the 1981 General Assembly was 94% of the income for that year. It was suggested to reduce the allowance to US $225 000. Although Prof. Smets expected the subsistence costs to be lower for General Assembly in Leuven than Davos, travel costs must be higher due to inflation of air fares.

The Netherlands Delegation supported UK in insisting that a formal proposal be introduced before Council at Davos to reduce the budgetary allowance by US - $100 000 for the 1981 Assembly.

Switzerland made an amendment to the UK proposal, supported by Israel, suggesting that the Leuven allowance be reduced only by US - $50 000. Hungary put forward an idea to raise additional income: the host country should organize a manufacturers equipment exhibition at the biennial IUPAC Congress with the profit, expected to be substantial, to go into IUPAC funds.

In view of the diversity of views, the President called for a vote in favour of accepting the 1981 budget (as of 6 Sept. 79). Council Resolved itself against the budget and a vote was then taken on a proposal from the US Delegation to reduce the deficit on the 1981 budget by US - $100 000 as a whole, with the Finance Committee allowed flexibility on how to achieve it. Council Resolved itself in favour.

DUES STRUCTURE FOR 1980 AND 1981

On the recommendation of the Executive Committee it was Resolved unanimously:

> that the present membership category minimum subscriptions be increased by 10% for 1980 onwards so that IUPAC will not fall further behind world inflation trends.

The UK Delegation was concerned that there was no proposal at Davos to raise the basic unit for a Company Associate, but was advised that would almost certainly be forthcoming from the Finance Committee deliberations on revision of the dues structure.

The Executive Committee at Paris had recommended Council to approve that a country may apply to stay only one category lower than required by its chemical turnover. The proposal required that:

(1) a recommended chemical turnover, subscription was open for correction by an individual country or by IUPAC.

(2) Company Associate income may continue to be regarded as part of the national subscription.

The proposal was approved by Council. However, it could not become effective before 1982, because a change was first required to Statute 3.3, which could not be considered by Council until 1981.

Council Resolved:

> that the requests for transfer of Category by Ireland ($_D$ to C), Republic of South Afica (B1 to B2), and Yugoslavia (C to B1) be approved.

An initial vote against allowing Venezuela to revert to Category D from B1 was subsequently reversed on the basis that the reassignement should be for a period of two years.

APPLICATIONS FOR MEMBERSHIP OF IUPAC

Council Resolved

> that the application for membership of the Union (Category B1) by the Iraqi Chemical Society be approved

and accepted the recommendation of the Bureau that, in view of the lack of information about the present status of the Iranian Chemical Society, its application for membership not be considered.

Prof. Smets summarized developments since the discussions by the Executive Committee earlier in the year on the participation of China in IUPAC.

Faced with a similar situation in recent months, IUB had moved very actively towards a solution acceptable to all parties. The IUB Officers had made considerable efforts to keep IUPAC informed of the agreement and it had been used as a basis for discussions between the IUPAC Officers and Peoples Republic of China representatives in Helsinki and with PRC and Taiwan representatives in Davos.

To resolve the contradiction between the spirit of Statute 2, which defined the objects of the Union as applicable without discrimination to the chemists of the member countries, and Statute 3.1, which restricted membership to one national organization for a country, President Smets ruled that:

> in the case of a country in which present circumstances make it impossible for all chemists to engage in coordinated scientific activities over the whole territory, "country" as used in Statute 3.1. shall designate geographical territory, in which a community of chemists pursue independent scientific activities.

To ensure the representation in IUPAC of all chemists from China, the Bureau recommended Council to admit to membership of the Union the Chinese Chemical Society, Beijing, so that the membership listing of Adhering Organizations would then read:

CHINA CHINESE CHEMICAL SOCIETY

CHEMICAL SOCIETY LOCATED IN TAIPEI, CHINA

Council approved the recommendation and expressed its sincere thanks to the representatives of the two Chinese Chemical Societies involved for their excellent spirit of cooperation, and to the Officers of IUB for the very friendly way in which they had kept the IUPAC Officers informed of their discussions, thus enabling our Union to arrive at the present solution.

REPORTS OF DIVISION AND SECTION PRESIDENTS

The Division Presidents and the President of the Clinical Chemistry Section referred briefly to their precirculated reports then informed Council of the further progress made at Davos.

Prof. S. Sunner said that new subcommittees had been formed in the Physical Chemistry Division on symmetry notation for molecular spectroscopy and on catalysis. The subcommittees on calibration and test materials and on storage and retrieval of spectroscopic data were dissolved, and that on chemical kinetics reconstituted with the intention to prepare a work programme for a full commission in 1981. Important work to revise Latimer's classical tables was now forcefully under way to produce a critical compilation of electrode potentials.

In the Inorganic Chemistry Division, after obtaining the advice of other IUPAC bodies Prof. N.N. Greenwood reported that a new amended definition of atomic weight would be recommended. Changes in the value and/or uncertainty in atomic weight for 12 elements were proposed. The Commission on Nomenclature of Inorganic Chemistry had been reorganized completely in order to undertake a major revision, occupying 6-10 years, of the 1971 edition of its nomenclature compedium (The Red Book).

The new extended edition of Nomenclature of Organic Chemistry had now been published and according to Prof. P. Yates it was selling well. In addition the important glossary of terms used in physical organic chemistry had just appeared in PAC. At Davos good progress had been made in preparing for publication a glossary of terms used in photochemistry, an interdivisional subject located in the Organic Chemistry Division.

Prof. V.A. Kabanov announced that further reports were in preparation from collaborative programmes of three existing working parties of the Macromolecular Division. New working parties would become active shortly on kinetic parameters for free-radical polymerization

and on surface properties of films and fibres, while plans were in hand to develop a programme on thermal properties of polymers.

Dr. T.S. West indicated that the Bureau at Davos had accepted the recommendation of the Analytical Chemistry Division not to continue to enlarge the terms of reference of the Commission on Analytical Radiochemistry and Nuclear Materials. No progress had been made because of the death of one and lack of communication from the other nuclear and radiochemistry expert appointed at Warsaw. The Inorganic Chemistry Division was now reassessing if there were any aspects of nuclear and radiochemistry worthy of IUPAC activities.

The subcommittee on new projects of the Applied Chemistry Division was expected to submit its final report by the end of 1979 according to Prof. H. Suomalainen.

Dr. M. Roth drew attention to one of the most significant consequences of the activities of the Clinical Chemistry Section: the progressive adoption of SI units for reporting results in clinical medicine and the endorsement by WHO of IUPAC recommendations on quantities and units. Efforts were being devoted to improve teaching programmes in clinical chemistry, particularly in developing countries.

REPORT OF COMMITTEE ON PUBLICATIONS

Mr. T.G.H. Michael emphasized that royalties from its publications constituted the third largest source of income to the Union, and the task of the Committee was to maximize such revenue and arrange the best possible publication mechanisms. Total subscriptions to PAC were less than 1000 and he invited all present to make a major effort to increase the reading of the journal and subscriptions thereto. The first issue of Chemistry International had just appeared and would ensure a greater knowledge of IUPAC. He appealed for input of material to the editor and for sales propagation: a large financial investment had been made by IUPAC and Pergamon Press. Steps were taken to make available some publications to individuals at reduced prices and subscriptions rates. Greater compliance was needed from the organizers of IUPAC-sponsored symposia with the requirement to publish with the Union and material arising therefrom.

REPORT OF CHEMRAWN COMMITTEE

The initial enterprise under CHEMRAWN, the World Conference on Future Sources of Organic Raw Material (Toronto, 1978) had been well attended and constituted both a scientific and finacial sucess. A perspectives and recommendations volume had been distributed to decision makers throughout the world. Arrangements were now being made for a CHEMRAWN II Conference on Chemical Research to Meet World's Expanding Food Needs (Manila, 1982), which would be heavily biased towards developing nations. A followup to CHEMRAWN I was envisaged during 1983-5 and other aspects of the conference recommedations were under consideration by the CHEMRAWN and COCI bodies of IUPAC. Possible topics for further world conferences were chemistry of the oceans, chemical basis of carcinogenesis, chemical aspects of water quality and conservation. A set of guideleines was being developed for future CHEMRAWN activities.

PROPOSALS FORMALLY RECEIVED FROM NATIONAL BODIES

A proposal (March 1979) from the US National Committee for IUPAC, for experimental modification of the structure of the Union to permit individual membership of Divisions, had been circulated prior to the General Assembly. The Macromolecular and Analytical Chemistry Divisions had declined to participate in a trial evaluation. Dr. West said that the Division Presidents Group recognized and approved of the spirit and general intention to maximize the participation in IUPAC of all chemists and to bring in additional income, but they did not believe these aims could be accomplished easily by the proposed mechanism.

Council endorsed the suggestion of Prof. Smets that a Subcommittee (chaired by Dr. T.S. West) be appointed to look further into the matter and report back at the next General Assembly.

PROPOSALS FOR NEW BODIES AND DISSOLUTION OF EXISTING BODIES

In accordance with its decision at Warsaw, Council approved that the Commissions on Food Properties and on Food Contaminants be combined into a single Commission on Food Chemistry with 8 Titular Members but with 12 Associate Members until further notice.

Following the recommendations of the Bureau, Council Resolved that:

(1) the Commission on Terminal Pesticide Residues and on Pesticide Residue Analysis be combined into a single Commission on Pesticide Chemistry with 12 Titular Members until 1981 and 8 thereafter, but with 12 Associate Members until further notice.

(2) the Subcommittee on Solubility Data be elevated to Commission Status within the Analytical Chemistry Division, but with 6 Titular Members only for the present.

(3) the Clinical Chemistry Section be elevated to Division status in the Union.

(4) the names of the following IUPAC bodies be changed -

"Commission on Colloid and Surface Chemistry" to "Commission on Colloid and Surface Chemistry including Catalysis"

"Commission on Atomic Weights" to "Commission on Atomic Weights and Isotopic Abundances"

"Commission on Fermentation" to "Commission on Biotechnology"

ELECTIONS

Prof. Nagakura was declared the elected Vice-President, the result being greeted with acclamation by Council.

Dr. Graulich was declared the elected Treasurer.

Prof. Ourisson was declared reelected Secretary General.

After a written and secret vote for 6 vacancies on the Bureau, the 6 vacancies were declared to be filled by Prof. Jeannin, Koptyug, Perez-Masiá, Tonks, Vlček, and Wagner.

RATIFICATION OF DATES AND PLACE OF 31st GENERAL ASSEMBLY AND 28th CONGRESS

31st General Assembly-

Further to the deliberations of the Executive Committee, Council ratified the dates as 25th August-2nd September 1981 for the 31st IUPAC General Assembly at Leuven.

28th Congress

The proposal of 16th-22nd August 1981 by the Canadian organizers as the dates for the 28th IUPAC Congress at Vancouver was ratified by Council; and the scope of the scientific programme, as indicated in the first circular, was approved subject to the comments of the Bureau.

PLACE OF 32nd GENERAL ASSEMBLY AND 29th CONGRESS

32nd General Assembly

On the recommendation of the Bureau Council Resolved:

> that, subject to financial stability of the Union, the invitation from the Danish National Committee of Chemistry to host the 32nd IUPAC General Assembly at the Technical University of Denmark in Lyngby in 1983 be accepted.

29th Congress

Despite reservations made by the organizers of the 1979 Congress at Helsinki recently on the need for future meetings to cover simultaneously several branches of pure and applied chemistry, Prof. Zollinger was convinced that IUPAC should not forgo the possibility of holding a Congress in 1983. He hoped that a member country would still come forward with an offer to host the Congress.

VOTE OF THANKS

On behalf of the Union, Prof. Smets thanked Schweizerische Komitee für Chemie for the excellent support given to IUPAC in connection with its 30th General Assembly.

After handing over the Presidency to Prof. Zollinger, the latter cited his main aims for the next two years as being: maximize interaction between IUPAC and all chemists; very high priority to CHEMRAWN activities; better intergration of industrial chemistry into IUPAC activities; maintain and increase the quality of IUPAC programmes.

STANDING COMMITTEES

INTERDIVISIONAL COMMITTEE ON NOMENCLATURE AND SYMBOLS

COMMITTEE ON CHEMISTRY AND INDUSTRY

CHEMRAWN COMMITTEE

COMMITTEE ON TEACHING OF CHEMISTRY

INTERDIVISIONAL COMMITTEE ON NOMENCLATURE AND SYMBOLS

(MEETINGS OF 2-7 SEPTEMBER 1979)

1) Current Program. Since the 29th General Assembly in Warsaw (1977), IDCNS has been called upon to review 22 documents generated within IUPAC. A few of these contained serious scientific errors or misuse of nomenclature or symbols, which were corrected as a result of IDCNS review. IDCNS has itself generated a document on "Use of Abbreviations in the Chemical Literature," which was dicussed at the 30th General Assembly in preparation for publication. IDCNS participated also in a discussion of the definition of "atomic weight" (mean relative atomic mass) at a joint meeting with other nomenclature commissions and the Committee on Teaching of Chemistry, convened by the International Commission on Atomic Weights (IUPAC Commission II.1).

Although most of IDCNS's business is conducted by mail, highly useful meetings have been held annually (including those at the biennial General Assemblies). Information is thereby exchanged concerning recommendations on nomenclature and symbols under study in the various Divisions and Sections of IUPAC, as well as in other international organizations with interests and responsibilities overlapping those of IUPAC. Relations with IUB and with ISO/TC 12 have been particularly close.

A perennial concern has been the distribution of IUPAC recommendations on nomenclature and symbols. Part of this concern has to do with effective distribution of recommendations in tentative form, to ensure widespread opportunity for comment by informed users. There is major concern also over the high cost of IUPAC publications in general, which restricts the availability of IUPAC recommendations in "final" form (i.e., as of a specified date). Constructive discussion of these concerns was held by IDCNS with the Secretary General of IUPAC at the present (1979) General Assembly.

2) Changes in Membership. As of the close of the 30th General Assembly, the membership of IDCNS has been revised to include one Titular Member and one (or more) Associate Member, instead of two Titular Members, from each Division. The Chairman will be entitled to select three members at large (possibly including selected Associate Members), besides the officers and Titular Members, to attend each authorized meeting at IUPAC expense. The change will reduce the cost to IUPAC of the meetings held by IDCNS.

The term of Dr. K. L. Loening as Chairman continues to 1980. Prof. N. Lozac'h was renominated as Vice-Chairman for a four-year term extending to 1983. Dr. R. B. Fox was nominated to succeed Dr. M. A. Paul as Secretary for a four-year term extending to 1983.

3) Next Meeting. The Committee plans to hold its next meeting in Cambridge, England, on 9-12 September 1980.

COMMITTEE OF CHEMISTRY AND INDUSTRY

(MEETING OF 7 SEPTEMBER 1979)

1. COCI Information Letter: The first edition of the Information Letter has been published and has in the meantime been sent to all the Company Associates. It has been suggested that in each of the following editions the tasks and aims of one IUPAC division/commission should be described.

2. University/industry interactions in chemistry: Prof.Rao gave a brief report on the work and plans of the Committee on Teaching of Chemistry (CTC). The contacts between COCI and CTC should be maintained. CTC is asked to consult COCI directly if it has any specific questions connected with the chemical industry.

3. Chemical industry and IUPAC:Prof. Zollinger explained his ideas on the closer involvement of the chemical industry in IUPAC activities. He asked COCI to act as an advisory body to the IUPAC presidency, offering suggestions on the current IUPAC programmes from the point of view of the chemical industry and providing ideas for future activities.It was agreed to comply with this request and form a COCI subcommittee to carry out these duties.

4. Place of chemical engineering in IUPAC:Prof.Behrens gave a survey of the chemical engineering, corrosion protection and biotechnology organizations currently in existence throughout the world.Recommendations:a) Clear separation of activities into products/product properties (IUPAC) and processes/chemical technology (chemical engineering organizations,etc.) b)Close cooperation between IUPAC and the organizations in the other fields of study should be aimed at where it does not already exist.

5. Commission on Atmospheric Environment (VI. 5): It is recommended that a member of COCI (Dr. Epstein) should attend the meetings of Commission VI. 5 as an observer.

6. CODATA:Dr. Schönberg expressed the interest of CODATA in cooperation with COCI. It was agreed to invite a representative of CODATA to future COCI meetings.

7. CHEMRAWN Committee: The cooperation between COCI and CHEMRAWN Committee should be strengthened.On the proposal of CHEMRAWN Committee (Dr.Rossiter) it was agreed to form a COCI Subcommittee "Organic Raw Materials" in accordance with the first recommendation outlined in "CHEMRAWN I: Perspectives and Recommendations".Furthermore it should give some support in preparing the planned follow-up conference to CHEMRAWN I.It was agreed, that a member of COCI (Dr.Rhyner) should participate in the meetings of CHEMRAWN Committee.

8. Subcommittee on New Projects (SNP): The results of the COCI-SNP-Joint Meeting were rediscussed. In order to continue the work of SNP and to initiate new IUPAC programmes it was proposed that a special commission be formed, which should report to the Executive Bureau directly. Representatives of all IUPAC Divisions and of COCI should belong to it.

9. Committee on Scope: At the request of Dr.Egan (Chairman,Committee on Scope) COCI will endeavour to find a suitable person from industry to act as Secretary to this Committee.

10. Financial support by COCI:As a matter of principle it is not possible for COCI to be a money raising body.But COCI could help in opening doors for direct request to Company Associates.In the special case of Catalyst Reference Materials Project(Dr.Mysels) COCI will supply a supporting letter to approach catalyst producing companies.

11. COCI Membership:Dr.Suckling (UK) was appointed to the vacant position on the Committee caused by the retirement of Dr. Barrett.

12. Next Meeting: This will take place in Basel, Switzerland, on 26 September 1980.

13. Present:a)COCI Members:J.W.Barrett,K.H.Büchel(in the chair),J.A.Epstein,R.J.Fawcett, G.Jäger, V.Macho, R. Mormont, P.Rhyner, A.S.Shoukry, D.Sianesi, K. Skagius.
b)GUESTS:D.Behrens,P.Farago,M.Gellender,R.S.Hansen,G.S.Harrison,R.M. Kunz, K.I. Mysels, C.N.R.Rao, B.W. Rossiter, M. Schönberg, H. Zollinger.

CHEMRAWN COMMITTEE

(MEETING OF 5 SEPTEMBER 1979)

CHEMRAWN I The volume "Perspectives and Recommendations had been published following the Conference on Future Sources of Organic Raw Materials held in Toronto 10-13 July 1978 and particular attention was drawn to the main conclusions and recommendations on pp 3-4, as follows.

1 An international group should be formed to assess the organic supply problem in a continuing way.

2 An assembly of high-level government science advisors should be formed. The group should consider the problem of organic material supply in terms of governmental actions, determine priorities for budgeting Research and Development, and provide sociotechnical plans for inevitable changes in lifestyle.

3 Industrial research and development bodies must address the problem. Industrial organisations should form a group to monitor and assess technical progress.

4 The leading scientific societies should form a group to ensure that the basic scientific issues are identified, publicised and presented at scientific gatherings.

5 A task force should be organised, including media experts, to publicise the prospects and consequences of shortages of organic materials.

The volume of proceedings would be published shortly. The importance of these and the need for early action was agreed and a follow-up conference, Future Sources of Organic Raw Materials II would be considered for 1983-85.

Other CHEMRAWN Meetings. There was substantial progress in the organisation of CHEMRAWN II, under the title "Chemical Research to Meet the World's Expanding Food Needs", to be held at the Philippines Conference Center in Manila 7 - 11 February 1982. Discussion documents will be prepared on "Chemistry and the Oceans", "Chemical Aspects of the Conservation and Quality of Water Supplies" and "The Evaluation of Environmental Carcinogens", for consideration at the next meeting of the Committee. Other subjects discussed included the biochemical conversion of natural resources into energy and chemicals, and corrosion.

Guideline Draft guidelines for CHEMRAWN activities previous circulated were approved and forwarded to the Executive Committee.

Next Meeting This would be held in Frankfurt/Main, 20 - 21 February 1980.

COMMITTEE ON TEACHING OF CHEMISTRY

(MEETINGS OF 27, 30 AUGUST & 1 SEPTEMBER 1979 HELD IN DUBLIN, IRELAND)

Please note that references to previous Committee meetings are given by the prefix of the year: thus, the meetings at Frankfurt, Ljubljana and Cassis are indicated by 76/, 77/ and 78/.

Present: C N R RAO (Chairman), D J WADDINGTON, G S HAMMOND, G ILLUMINATI, D VITOROVIC (Members); I DILARIS, A H GUERRERO, R GUILLAUMONT, T R HITCHINGS, C HABRAKEN, U HOFACKER, A KORNHAUSER, B T NEWBOLD, L PAOLONI, R C PAUL, M P B A PEREIRA, T SCHONFELD, P A START, C SZANTAY, J T SHIMOZAWA, N G VANNERBERG (National Representatives); G BRUNOW, G KEMPE, B ORGER and V RINGNES represented P MALKONEN, H BREMER, G C GERRANS and K H HOLM, respectively.

79/4 (a) CONTINUING EDUCATION IN INDUSTRY (76/6, 77/2(v), 78/4). Professor COOK prepared a lecture on the IUPAC CTC survey for the UNESCO conference "University-Industry Interactions in Chemistry", held in Toronto, Canada, in December 1978. A resume of the Conference has been prepared by UNESCO and Professor COOK was asked for his response. It was hoped that Professor RAO would be able to attend the next meeting of the Standing Committee on Chemistry and Industry.
(b) ANTHOLOGY OF CHEMICAL EDUCATION (76/8, 77/2(vi), 78/4). The Secretary has finished editing this book, which will form part of the UNESCO New Trends Series.
(c) PROCEEDINGS OF THE INTERNATIONAL SYMPOSIUM, LJUBLJANA (77/3, 78/4). The Proceedings have now been published. UNESCO has agreed to give copies to all Members and National Representatives.
(d) RESOURCE BANK OF VISUAL AIDS FOR CHEMISTRY TEACHERS (77/13, 78/4). Publication of some of the material by the Chemical Society in London was expected next year and some of this material will be sent to Members and National Representatives for comment.
(e) CHEMICAL NOMENCLATURE (77/6, 78/10). The Committee noted that the Second Edition of "Chemical Nomenclature, Symbols and Terminology for Use in School Science" had been published by the Association for Science Education (U.K.).
(f) CHEMISTRY FOR PEOPLE (77/5(vii), 78/13). A copy of our report on "Chemistry for People" has been sent to the FECS Working Party on Chemical Education and the Working Party on Professional Affairs who are undertaking a project on "The Image of Chemistry and Chemists".

79/5 INTERNATIONAL NEWSLETTER ON CHEMICAL EDUCATION (78/6). Newsletters 9 and 10 have been published, in September 1978 and December 1978. A further UNESCO contract had been signed for publication of Newsletters 11 and 12 in 1979 and 13 and 14 in 1980. UNESCO was arranging for translation and publication of No 11 in French.

79/6 CHEMICAL EDUCATION 1973-77 (77/5(i)). Publication of the IUPAC CTC book was expected in early 1980.

79/7 INTERNATIONAL CONFERENCE ON CHEMICAL EDUCATION, DUBLIN 1979. 317 participants from 59 countries took part. UNESCO were thanked for assistance in funding. Never before had so many schoolteachers from different countries taken part in such a conference, and especial thanks were extended to those National Chemical Societies which had supported them. Thanks were also expressed to COSTED and ICASE, amongst others, who had helped participants.

79/8 PROBLEMS OF CONVERSION TO SI UNITS AND ITS EFFECT ON THE TEACHING OF CHEMISTRY (77/7, 78/9). Professor NEWBOLD presented the second report, this concerning university teaching.

79/9 LOCALLY-PRODUCED EQUIPMENT (77/5(ii), 78/12). A review of centres and individuals where simple equipment for senior secondary schools and universities has been written. A Workshop for about 20 interested individuals in developing countries was being arranged. A contract had been signed with UNESCO, via ICSU, to help with arrangements for it. The Workshop will probably take place in India early in 1981.

79/11 UNESCO UNIVERSITY TEACHING PROGRAMME (78/16). The Programme will continue with a further workshop in the Arab Region. It is likely to be at the University of Kuwait in January 1981. A contract will be given for the work by UNESCO.

79/12 TEACHING SCHOOL CHEMISTRY (77/5(vi), 78/17). The Secretary will edit this volume. The book is to be addressed to secondary teachers, teacher-educators, school administrators and curriculum planners.

79/13 TECHNICIAN TRAINING. Professor HAMMOND pointed out that technicians must be trained for many different jobs, in industry, government research and analytical laboratories, universities, schools, etc., and that we could learn from each other about training practices. He proposed that we should ask individuals from different countries to state what the current practice is and what might be done, and that UNESCO sponsorship should be sought for a workshop on technician training which would involve users as well as educators. The goal of the programme would be to sanction, and thereby lend status to, high quality training programmes. The Secretary was asked to see whether the proposals could be integrated with the work of the Technician Training Sub-Committee set up by ICSU CTS and to consider collaboration with the IUPAC Company Associates and with COSTED.

79/14 SIXTH INTERNATIONAL CONFERENCE ON CHEMICAL EDUCATION. The Committee accepted the invitation by the American Chemical Society (Education Division), the National Research Council, the IUPAC Committee of the U.S., and the University of Maryland to hold an IUPAC-sponsored International Symposium on Chemical Education at the University of Maryland, 1981. The Organiser will be Dr Margery GARDNER of the University of Maryland, at present with the National Science Foundation. Professor G S HAMMOND and Professor W B COOK and the Secretary were appointed to represent CTC on the Programme Committee.

79/15 EXPENSES FOR NATIONAL REPRESENTATIVES. Professor COOK, by letter, proposed that IUPAC should pay expenses for a minimum of two national representatives to attend the meeting of the Committee, thereby ensuring that the Committee was more representative and that individuals would feel more involved.

79/16 FIRST INTERNATIONAL CHEMISTRY CONFERENCE IN AFRICA. The Chairman outlined plans for the First International Chemistry Conference in Africa. IUPAC CTC was being invited to take part in the Chemical Education section of the Conference, to be held at the University of Nairobi, 28 July - 1 August 1980.

79/19 COMMITTEE OF SCIENCE AND TECHNOLOGY IN DEVELOPING COUNTRIES (COSTED). The Chairman and Secretary gave papers at the meeting on "Chemical Education in Developing Countries", held at Penang, April 1979. The Proceedings are being edited by the Chairman and will be published by COSTED. The Chairman announced that arrangements are being made for joint collaboration on a symposium on "Technician Training in Developing Countries, a workshop on "Locally-produced Equipment", and a Workshop for University Teachers.

79/25 NEXT MEETING OF THE COMMITTEE. Two invitations were made, by Professor KORNHAUSER and Professor SCHONFELD, for the 1980 meeting to be held in Ljubljana and Vienna, respectively. The Executive Committee was asked to discuss these proposals. The 1981 meeting will be held in Leuven, Belgium, at the same time as the 31st General Assembly of the Union.

I. PHYSICAL CHEMISTRY DIVISION

COMMISSION ON PHYSICOCHEMICAL SYMBOLS, TERMINOLOGY, AND UNITS.
COMMISSION ON THERMODYNAMICS
COMMISSION ON ELECTROCHEMISTRY
COMMISSION ON PHYSICOCHEMICAL MEASUREMENTS AND STANDARDS
COMMISSION ON MOLECULAR STRUCTURE AND SPECTROSCOPY
COMMISSION ON COLLOID AND SURFACE CHEMISTRY INCLUDING CATALYSIS

PHYSICAL CHEMISTRY DIVISION COMMITTEE

(REPORT OF MEETINGS 2,6 AND 7 SEPT. 1979)

The proposal by the US National Committee to modify the organization of IUPAC so that it could enrol individual members was discussed. This would make IUPAC into an international chemical society and the Committee did not believe the present need for such a society was clear. They did however consider that IUPAC would be in a strong position to give a lead, in consultation with National Societies, at an appropriate time. They however strongly opposed the proposal that it could be implemented in one or more Divisions on a trial basis for a limited time.

As a result of discussion of proposed new activities in the Division, it was agreed that a Commission on Reaction Kinetics should be established as soon as possible. A subcommittee under the chairmanship of Prof K J Laidler will be asked to propose terms of reference and an initial slate of members. The question of a general reorganization of the Division was touched on, and the desirability that the organization should be flexible was recognised.

There was agreement that publication in Pure Appl.Chem. is inadequate as a means of disseminating Recommendations because of its small circulation. Publication of a collected volume of Recommendations by the Physical Chemistry Division does not seem useful because their subject matter is so disparate, and republication as widely and freely as possible in appropriate specialist journals must be our aim. Here the requirement that journals republishing from Pure Appl.Chem. should advertise IUPAC publications needs a less restrictive and demanding interpretation than has been applied in the past. It was agreed that Commissions should be encouraged to seek translation and publication of their recommendations as widely as possible through the National Adhering Organizations.

The article on surfactants in Information Bulletin No 2, 1979, pp 13-14 contained errors and was unacceptable to Commission I.6. The desirability of popularizing Recommendations was accepted but it was agreed that a procedure must be adopted that will ensure that popular articles are cleared by experts before they are published.

Concern was expressed at the high price of IUPAC publications, and the Committee wished to emphasise the importance of avoiding the appearance of commercial exploitation of the voluntary work of IUPAC members in producing major works; an example was the high price of the Solubility Data Series.

The Committee reluctantly accepted the request from the President of IUPAC that the number of Titular Members in Commissions should, as a temporary measure, be reduced to seven, and the full list of eight members submitted by Commission I.4, which included one new Titular Member, was not approved. Commission I.2, however, was in a special position since all eight Titular Members were eligible to continue without re-election and the Committee did not think that active members ought to be requested to resign; an adjustment would be made in 1981.

A request by Commission I.6 that its name should be changed to "Commission on colloid and surface chemistry including catalysis", was supported. The following subcommittees were dissolved: I.4, Calibration and test materials; I.5, Storage and retrieval of spectroscopic data. The following new subcommittees were established: Division Committee, Chemical Kinetics; I.5, Symmetry notation for molecular spectroscopy; I.6, Catalysis; I.6, Reporting gas adsorption data; I.6, Chemical physics of surfaces.

Prof E U Franck withdrew from the office of Vice-President as he was unable to assume the responsibilities of the Presidency. Prof N Sheppard had been elected prior to the meeting to succeed as President. New members elected were Prof R S Hansen, Dr D R Lide and Prof Kirrill I Zamaraev; Dr Lide was elected as Vice-President.

The next meeting of the Division Committee will be at the IUPAC General Assembly in 1981.

I.1 COMMISSION ON PHYSICOCHEMICAL SYMBOLS, TERMINOLOGY AND UNITS

(MEETINGS ON 3-6 SEPTEMBER 1979)

Chairman, David R. Lide Jr.
National Bureau of Standards
Office of Standard Reference Data
Washington D.C. 20234

1) Manual of Symbols and Terminology for Physicochemical Quantities and Units. The new edition of the Manual (Pure and Applied Chemistry 51, 1-41 (1979)) is being circulated by the Commission in reprint form to journal editors and others who should be aware of IUPAC recommendations in this area. A hardcover version is also being sold by Pergamon. The Commission discussed the future of the Manual and decided that a more extensive revision might be desirable in 3-4 years time. In particular, the next edition should include lists of recommended symbols and terms extracted from the more detailed (and separately published) appendices covering special areas of physical chemistry.

2) Symbols and Terminology in Chemical Kinetics. A Subcommittee under the chairmanship of K. J. Laidler presented its report on this subject, which was discussed by the full Commission. The report makes a series of recommendations on terms used in chemical kinetics; it represents input from organic chemists, biochemists, and chemical engineers as well as physical chemists engaged in kinetics research. Since some of the recommendations in the report are contrary to the current practices of certain groups, the Commission decided to solicit comments from a broader group of scientists before the final acceptance. However, the majority of the Commission feels that the new recommendations reflect the actual usage of most research workers concerned with chemical kinetics, and it is likely that the report will be approved in substantially its present form.

3) Commission Membership. I. Ansara was elected Secretary, and it was agreed to recommend K. H. Homann, D. H. W. den Boer, and K. Kuchitsu as new titular members. Retiring titular members J. Koefoed, A. Schuijff, and K. Weil were recommended to continue on the Commission as associate members; appointment of E. R. Cohen, E. T. Denisov, and A. Perez-Masiá as associate members was also recommended.

4) Next Meeting. No further meetings are planned until the 1981 General Assembly.

5) Present. D. R. Lide, Jr., K. Weil, I. Ansara, N. Kallay, V. Kellö, J. Koefoed, A. Schuijff, A. Perez-Masiá, M. A. Paul, D. H. Whiffen.

I.2 COMMISSION ON THERMODYNAMICS

(MEETINGS ON 3-6 SEPTEMBER 1979)

1) Appendix IV of the Manual of Symbols and Terminology for Physicochemical Quantities and Units (Pur.Appl.Chem. 51, 393-403, 1979). The following recommandations for the final text have met agreement of the Commission I.1 and two representatives of Commission II.3 (C.B.Alcock, Chairman, and P.W. Gilles) : change of the provisional text on page 400, § 3, line 3... "historically the defined standard state pressure has been 1 standard atmosphere and most existing data use this pressure. With the growing use of the S.I. units, this is inconvenient. It is recommended that workers should report their values at a defined standard pressure of 0.I MPa (which is equal to 1 bar)".

An additional footnote has to be placed on page 401 concerning the standard temperature : Footnote "$\mathbb{T}$, T_a and T° are found in the litterature for this temperature. No definite recommandation can yet be made between $\mathbb{T}$ and T_a, but T° is not recommended because it is already used with the meaning of standard temperature in general".

Section 5.1 of the Appendix will be reconsidered at the next meeting of Commission. Only one symbol for standard (°) will be recommended.

Helmholtz and Gibbs energies are considered to be replaced by Helmholtz and Gibbs functions respectively in a new edition of the Manual in order to obtain agreement with IUPAP and ISO recommandations.

The chairman of Commission will send letters to editors of chemical journals and textbooks in favour of IUPAC symbols and terminology.

The Commission will approve a definite text of Appendix IV at its next meeting at Merseburg in August 1980, taking into accounts the comments received.

2) Book on Thermodynamics and transport properties of salts with organic anion or cation. This book is nearly ready for publication.

3) A book on Critical evaluation of chemical thermodynamic data is under preparation, as well as a Review on the Assignment of uncertainties to thermochemical data.

4) 6th International Conference on Thermodynamics : will be held in Merseburg, DDR, August 1980.

5) 7th International Conference on Thermodynamics : will be held in London, UK, in 1982.

6) The Commission endorse the plan of Subcommittee on Thermodynamics Tables to hold its second workshop on equations of state in 1980 at the University of Bochum, FRG. The publication of a Guide to the correlation of experimental thermodynamics data on pure fluids is planed.

.../...

7) Commission membership. No change for the next two years.

8) Next meeting. This will take place during the VIth International Conference on Thermodynamics at Merseburg, August 1980.

9) Present. M. LAFFITTE, chairman, G.M. SCHNEIDER, secretary, S. ANGUS, G.I. ARMSTRONG, V.A. MEDVEDEV, Y. TAKAHASHI, I. WADSÖ, W. ZIELENKIEWICZ, M.DIAZ-PENA, P. FRANZOSINI, R.D. FREEMAN, G. SOMSEN, M. RÄTZSCH ; observers : E.F. WESTRUM, J.H. DYMOND.

I.3 COMMISSION OF ELECTROCHEMISTRY

(MEETINGS OF 3-6 SEPTEMBER 1979)

Present : N.IBL, Chairman ; R.PARSONS, Vice-Chairman; J.C. JUSTICE, Secretary; A.BARD, K.E. HEUSLER, J.KUTA, K.NIKI, Titular Members ; R.A. DURST, Associate Member ; G.R. FREEMAN and A. HOCHREINER , Observers.

1 - The final version version of R.Parsons' report on " Electrode reactions, rate coefficients and transfer coefficients", is in the stage of publication. The final version of N.Ibl's report "Transport phenomena in electrolytic systems" has been submitted for publication. Both reports will also be published in Electrochemica Acta.

2 - A shortened version of the report "Adsorption phenomena at electrified interfaces" will be prepared by S.Trasatti and R.Parsons.

3 - The critical compilation of electrode potentials by A.Bard and R.Parsons with J. Jordan (V-5) is well under way.

4 - The conductance data compilation by J.C. Justice is being continued. Some 1500 electrolyte-solvent systems are stored on computer magnetic support.

5 - The compilation of kinetic data by K.Niki and R.Tamamushi is currently being continued.

6 - The report of commission I-6 on "Chemical physics of surfaces" was discussed . K.E. Heusler is in charge, and following a joint meeting with I-6, it was agreed that he will prepare an additional section on "Surface Films" in that report.

7 - The change from multiple to single standard pH scale was thoroughly discussed in I-3 and with V-5 (cf.joint minutes with V-5).

8 - The draft on "Recommendations regarding the selection of reference Red-Ox systems" by G.Gritzner and J.Kuta has been discussed and approved. The final version will be presented at the next meeting.

9 - The commission plans the following work :

Revision and extension of Appendix III ; Collection of available parameters on semiconductor electrodes ; Standard redox-systems and generalization of acid-base concept to fused salts; Nomenclature on non-isothermal systems, Ionic transfer at ionic crystals.

10 - Election recommendations : R.PARSONS, Chairman ; A.J.Bard, Vice-Chairman ; J.C. Justice, Secretary ; K.E.Heusler, J. Kuta and S.Trasatti, Titular members , K. Niki continues .
Recommended as associate members : J.N. Agar, E.Budewsky, G.Gritzner, H.Holtan, N.Ibl, M.Keddam, R.Memming, B.Miller and J.Plambeck.

I.4 COMMISSION ON PHYSICOCHEMICAL MEASUREMENTS AND STANDARDS

(MEETINGS OF 3-6 SEPTEMBER 1979)

Status of Current Work:
1. Two additional chapters of Recommended Reference Materials for reflectance and pH have now appeared in Pure and Applied Chemistry. A chapter on testing distillation columns is in press, and five others (permittivity, electrolytic conductivity, viscosity, relative humidity, and thermal conductivity are in process of editing.
2. Annotated bibliography on Accuracy in Measurement will be expanded to include references in languages other than English.
3. Paper on Uncertainties in Measurement will be redrafted to include specific examples from physical chemistry.
4. Paper on Determination of Melting Points was recommended for publication in suitable journal.

Planned work:
1. Major thrust will be writing of various chapters on Recommended Methods of Measurement. Guidelines will be written outlining scope, format, etc. Chapters anticipated will cover vapor pressure, surface tension, density, pH, electrolytic conductivity, and reflectance.
2. National laboratories will be solicited to confirm work done on melting point determinations and refractive index measurements.
3. A paper will be written outlining further needs of industry (in particular) for reference materials not currently covered in Recommendations.
4. A sub-committee of three was formed to plan a symposium on Determination of Purity. Preliminary plans are for Budapest in 1982.

Reports Received:
Revision of IPTS-68; Density of Water; Activities of: ICTA; OIML; ISO-REMCO; OECD Chemicals Testing Programme.

Commission Membership:
Proposed for reelection as Titular Members were: H. Feuerberg, E. Jubrasz, G. Milazzo; for election, K. N. Marsh; for chairman, J. P. Cali; for secretary K. N. Marsh. Proposed for reelection as Associate Members were R. P. Graham and O. Suschny; as new Associates, D. Ambrose, L. Crovini, and P. Giacomo.

Next Meeting:
Belgium 1981 (four days). Meeting of sub-committee for planning Purity Symposium not yet determined.

Members Present:
All Titular and Associate Members were in attendance except K. N. Marsh, R. Sabbah, O. Suschny, and W. Trabczýnski from whom apologies for absence were received.

I.5 COMMISSION ON MOLECULAR STRUCTURE AND SPECTROSCOPY

(MEETINGS OF 5-6 SEPTEMBER 1979)

Present: Titular Members: E. D. Becker (Chairman), G. Zerbi (Secretary), J. H. Beynon, V. A. Koptyug, C. N. R. Rao, C. Sandorfy, D. W. Turner; Associate Members: P. Diehl, J. R. Durig, H. A. Willis; Subcommittee Members: C. J. H. Schutte, R. N. Jones, D. R. Lide, G. Wagniere; Observers: N. Sheppard (Division Committee Member), B. A. Goodman (U.K.), A. Mathias (U.K.), M. Geoffroy (Switzerland)

1. The document "Recommendations for the Presentation of Raman Spectral Data" was approved in final form.

2. The document "Recommendations for the Calculations of Molecular Electrical Properties from Infrared and Raman Intensity Measurements" was approved in Provisional form.

3. The Subcommittee on Storage and Retrieval of Spectroscopic Data was discontinued.

4. A new Subcommittee on Symmetry Notation for Molecular Spectroscopy was formed, with C. Schutte as chairman.

5. The Commission restated its strong support of widespread dissemination of IUPAC Recommendations. This could be achieved by a large scale distribution of reprints, by the republication in specialized journals and by suitable translations in various languages.

6. The Commission expressed its support and appreciation for the initiative of the Coblentz Society (US) to set up an Archives Committee in order to help preserve and disseminate historical material relating to vibrational spectroscopy. The Commission hoped that the coverage will be international and its scope will eventually be broadened.

7. Major projects approved for the next biennium were:

   a) Study of symbols, terminology and applications of electron spectroscopies.
   b) Exploration of errors and data presentation requirements for NMR.
   c) Symbols and nomenclature for electronic spectroscopy.
   d) Exploration of need for standardization in luminescence spectroscopy.
   e) Preparation of a list of journals for dissemination of information in spectroscopy.
   f) Recommendations for computer based collections of spectral data.
   g) Recommendations for symbols and nomenclature in electron paramagnetic resonance (EPR).
   h) Specifications for infrared reference spectra of materials in the vapor phase above ambient temperature.
   i) Recommendations for symbols and nomenclature in Raman spectroscopy.
   j) Test data for normal coordinate calculations.
   k) Further recommendations for symbols and terminology in mass spectroscopy.
   l) Symbolism and conventions in circular dichroism and optical rotatory dispersion.
   m) Symmetry notation for molecular spectroscopy.

8. The Commission will meet at the next General Assembly in 1981.

G. Zerbi, E. D. Becker

I.6 COMMISSION ON COLLOID AND SURFACE CHEMISTRY INCLUDING CATALYSIS
(MEETINGS ON 3-6 SEPTEMBER 1979)

Prof.Dr. J. Lyklema

Laboratory for Physical and Colloid Chemistry, Agricultural University, De Dreijen 6, 6703 BC WAGENINGEN, The Netherlands.

Present

Mysels (USA, chairman), Kemball (UK, vice-chairman), Lyklema (Netherlands, secretary), Hansen (USA, TM), Haber (Poland, TM), Kerker (US, TM), Roberts (UK, TM), Tamaru (Japan, TM), Gravelle (Fr., AM), Ter Minassian-Saraga (Fr., AM), Wolfram (Hung., AM), Mukerjee (US, AM), Haul (GFR, Repr.), Bagchi (USA,Obs.), Riehl (USA, Obs.), Ramsay (UK, Obs.), L'Eplattenier (Switz., Obs.).

Film Balance data reporting

Draft by Ter Minassian-Sarage was discussed. Reconstruction was found desirable. Further elaboration by mail.

Gas adsorption data reporting

First draft by Sing, discussed in general terms and in more detail by a working party under Haul. The continuation of a subcommittee under Sing was proposed to work this matter out; it is to convene at Brunel University (UK) in 1980.

Light scattering

Supplement to our manual. Draft by Kerker was discussed. Requires some extensions, surface scattering in particular. Further handling by correspondence, first within a small group, then within the commission as a whole.

Standard catalyst activities

I.6 notes that "catalysis" appears nowhere in IUPAC commissions or subcommittees, and suggests to add "including catalysis" to name of Commission. Subcommittee proposed to improve international coordination; proposed members: Haber, Hansen, Haul, Sing, Roberts, Tamaru, Gravelle, Haller, Block. Work at NPL (UK) to be continued under I.6 sponsorship.

International Association for Colloid and Interface Scientists (IACIS)

The provisional establishment of IACIS in August 1979 was noted. Commission I.6 has been instrumental in creating and sending International Newsletters on Colloid and Interface Science; these newsletters will be taken over by IACIS. IACIS is also to set the standard with respect to international congresses in this field. Constructive cooperation with IUPAC-I.6 is anticipated.

Changes in membership

Titular Members: Mysels and Kemball leave; Wolfram is proposed to become TM.

Elected new officers (1979-1983): Lyklema, chairman; Haber, vice chairman, and Kerker, secretary.

Associate members: Ertl leaves, Wolfram becomes TM, Tretiakov leaves. Proposed new members (1979-1983): Sing (UK), Churaev (SU), Hunter (Austr.), and Block (GFR). It is proposed to reelect Van Olphen as AM for two years (1979-1981) in view of his liaison function with ISO.

National representatives: The Commission accepts Everett (UK), Haul (GFR), Schirmer (DDR), Mason (Canada) and Nagy (Hung.), but delays its vote on the Japanese representative.

Miscellaneous matters

- The Commission believes that the total expenses of participants at international meetings should be known and taken into account when considering IUPAC sponsorship.
- The Commission suggests the updating of the critical evaluation of c.m.c. data (by Mysels and Mukerjee) which goes only through 1966.
- The Commission is concerned about the present distribution and prices of IUPAC publications.
- The Commission is concerned about the continuation by ISO of incorrect terminology norms, which have been rejected by ISO/TC91 and where proper IUPAC nomenclature is available.
- The Commission nominates Haber to represent IUPAC at the International Catalysis Congresses.

II. INORGANIC CHEMISTRY DIVISION

COMMISSION ON ATOMIC WEIGHTS AND ISOTOPIC ABUNDANCES
COMMISSION ON NOMENCLATURE OF INORGANIC CHEMISTRY
COMMISSION ON HIGH TEMPERATURES AND REFRACTORY MATERIALS

INORGANIC CHEMISTRY DIVISION COMMITTEE
(MEETINGS OF 2 AND 7 SEPTEMBER 1979)

1. The Report of the Division President to Council (see also this issue) was approved. Professor Greenwood emphasised the importance of publicising the activities of IUPAC to Industry and to the Public.

2. Sponsorship has been given to the following Conferences since the Warsaw meeting:
IX International Conference on Organometallic Chemistry, Dijon, September 1979
International Conference on Phosphorus Chemistry, Halle, September 1979
VI International Conference on Solid Compounds of Transition Elements,Stuttgart, June 1979
V International Conference on Zeolites, Naples, June 1980
IV International Conference on Boron Chemistry, Salt Lake City, July 1979
XX International Conference on Coordination Chemistry, Calcutta, December 1979
IX International Conference on Application of Mössbauer Effect, Portorose,September 1979
V International Symposium on Solute-Solute-Solvent Interactions, Florence, June 1980
XXI International Conference on Coordination Chemistry, Toulouse, July 1980
X International Conference on Organometallic Chemistry, Toronto, August 1981
Symposium on Macrocyclic Ligands, Basle, July 1980
Second BOC Priestley Conference, Birmingham,September 1980

3. Professor Greenwood reported on the Executive Meetings of the Division Officers in Prague and Copenhagen, particularly on the preparation of the draft of Division Rules and on the future activities of the Division.

4. The Committee approved the Reports of its three Commissions. Important items were as follows:
Commission II.1 (i) Change in the atomic weight of 12 elements; (ii)new definition of "atomic weight"; (iii) change the name of the Commission to "Commission on Atomic Weights and Isotopic Abundances"; (iv) publication of tables of atomic weights and isotopic abundances prepared by SAIC, and the fully referenced review of isotopic compositions and atomic weights of elements as separate issues; and (v) budget.
Commission II.2 (i) Complete revision of the "Red Book" (work already started); (ii) progress in the nomenclature of compounds difficult to name including boron compounds, chain and ring compounds, polyanions, inorganic polymers and systematisation of stereochemical nomenclature; (iii) budget.
Commission II.3 (i) Publication plan for (a) melting points of refractory oxides of metallic elements, (b) equilibrium studies of some metal vs. carbide systems, (c) international cooperative studies of solid electrode systems by use of electron microscopy, (d) data-compilation of solid silicon compounds, and (e) thermodynamic and transport phenomena of alkali metals; (ii) preparation of the Bibliography and a compilation of assessed data relating to thermodynamic properties of refractory materials to be published under the rubric "Data compiled by IUPAC International Collaborative Study Group and Others"; this will be open to world wide use through a computer in the University of Toronto accessible by international telephone and telex system; (iii) the formation of a Subcommittee for the Characterisation of Carbon, and (iv) budget.

5. The Committee approved the results of the election to the Division Committee and of new Titular and Associate Members of the Commissions. Professor Mary L.Good was elected the Vice-President and President Elect of the Division.

6. The final draft of "Rules of the Inorganic Chemistry Division", which was thoroughly studied by the Division Officers and discussed among the Members of the Division by correspondence, was presented by Professor Greenwood. The Committee unanimously approved the Rules for submission to Council (with a few slight modifications of phrasing).

7. The future policy of the Division was discussed at considerable length including the following items: (i) possible reduction of membership of the Division Committee and the

Commissions; (ii) experimental modification of the organisational structure of IUPAC with reference to proposed formation of International Chemical Society; (iii) SCOPE project; (iv) publication policy of IUPAC including the publication of a new periodical "Chemistry International", and that of the invited lectures given in International Conferences sponsored by IUPAC; and (v) IUPAC activities in Chemical Informatics, CHEMRAWN, Nuclear and Radiochemistry, and Solid State Chemistry. The Committee agreed to request that IDCNS invite Division President and/or the Chairman of a Commission to their meetings, whenever an important item related to a particular Commission of the Inorganic Chemistry Division was to be discussed.

8. Professor Greenwood thanked the members, particularly the Officers and those retiring at the end of this General Assembly.
Present: N.N.Greenwood, A.A.Vlcek, L.Malatesta, K.Saito, C.B.Alcock, G.Fritz, F.Gallais, R.C.Mehrotra, W.S.Horton, E.Roth, J.Chatt. Two observers-B.F.Myasoedov and A.H.Guerrero.

II.1 COMMISSION ON ATOMIC WEIGHTS AND ISOTOPIC ABUNDANCES (MEETINGS OF 3-6 SEPTEMBER 1979)

The Commission met in Davos with Professor E. Roth in the Chair. Twelve changes in atomic weight values or uncertainties were recommended. The listed values are considered to be accurate to ±1 in the last digit quoted (or ±3 if followed by an asterisk).

Neon	20.179	Nickel	58.69	Tantalum	180.9479
Argon	39.948	Palladium	106.42	Platinum	195.08*
Potassium	39.0983	Xenon	131.29*	Thallium	204.383
Titanium	47.88*	Samarium	150.36*	Uranium	238.0289

Most of these changes resulted from an element by element review performed by the Commission's Subcommittee for the Assessment of Isotopic Composition (SAIC).

The Commission directed SAIC to prepare, and present for adoption at the 31st IUPAC General Assembly, revised atomic weight tables and SAIC tables of isotopic compositions of the elements. These should include a set of uniform annotations (i.e., common to both sets of tables) and indicate the uncertainty in the last digit in the range from ±1 to ±9.

To ensure a wider distribution of the atomic weight and SAIC tables, the Commission recommended that in addition to their inclusion in the Atomic Weights Report for 1979, the tables be published separately

The Commission also recommended that, when it is completed, the SAIC element by element review should be published separately in a uniform format, because it is too large for inclusion in the Report.

The Commission discussed a report on isotopic abundance values of nonterrestrial materials. The processes underlying the variations from terrestrial values and some illustrative examples were also considered.

The Commission continues to review the literature for data on atomic weights, atomic masses, and isotopic abundances for terrestrial and nonterrestrial materials, and for new methods and techniques of measurement.

The Commission received advice and comments on the definition of atomic weight from other Commissions at a joint meeting at which Professor A.A. Vlcek presided. As a result, a new definition was proposed for approval.

The next meeting of the Commission will take place during the 31st IUPAC General Assembly which will be held at Leuven, Belgium from 25 August to 2 September 1981.

II.2 COMMISSION ON NOMENCLATURE OF INORGANIC CHEMISTRY

(MEETINGS OF 27 AUGUST - 1 SEPTEMBER 1979)

Present: Prof. J. Chatt (Chairman), Prof. Y. Jeannin (Vice-Chairman), Dr. D.M.P. Mingos (Secretary); Prof. L.F. Bertello, Dr. K.Ch. Buschbeck, Dr. G.J. Leigh, Prof. B.F. Myasoedov, Dr. W.H. Powell, Commission III.2 representative (Titular Members); Prof. R.M. Adams, Prof. D.H. Busch, Dr. T.D. Coyle, Prof. E. Fluck, Dr. J. Reedijk, Dr. E. Samuel, Prof. C. Schäffer (Associate Members); Dr. P. Fodor-Csanyi, Prof. A. Romao Dias, Prof. K. Saito, Mr. E.W. Godly (National Representatives); Mr. T.E. Sloan (Observer).

1. Changes of Membership

Prof. Dias, Mr. Godly, Mr. Sloan and Prof. Bokij were elected for nomination as Associate Members each for a four year term; and Prof. Adams and Dr. Buschbeck for a further two years. Prof. Busch, Dr. Coyle, Prof. Fluck, Dr. Reedijk and Dr. P. Fodor-Csanyi were elected for nomination as Titular Members for four years as replacements for the following retiring members: Dr. Mingos, Prof. Bertello, Dr. Buschbeck, Prof. Myasoedov and Dr. Powell. Prof. Chatt and Prof. Jeannin were elected as Chairman and Vice-Chairman respectively for a further two years, and Dr. Coyle as Secretary for four years.

2. Nomenclature of Polyanions

The Commission recommended some revisions to this document which deals with the nomenclature of iso- and hetero-polyanions and plans to approve (for publication) the final draft of the document at its next meeting.

3. Nomenclature of Regular Single Strand and Semi-Single Strand Inorganic and Coordination Polymers

This document, which was prepared jointly with the Macromolecular Nomenclature Commission, was approved subject to minor revision and passed on to the Macromolecular Nomenclature Commission.

4. Revision of the Red Book

A planning working party presented an outline for the Chapters of the Revised Red Book, which was approved by the Commission. In addition, a draft of an introductory Chapter dealing with the aims, functions and methods of nomenclature was accepted in principle by the Commission. Working parties on "Planning, grammar and methods", "Elements and symbols", "Ions and radicals", "Neutral molecules and compounds", and "Compilation of formulae" were set up by the Commission.

5. Additional Working Parties

Working parties on "Ring and Chain Nomenclature", "Stereochemical Nomenclature" and "Polyhedral Nomenclature" were set up and requested to prepare documents for circulation by Easter 1980.

6. Next Meeting

The next meeting will be held in Cambridge on September 3-9, 1980.

II.3 COMMISSION ON HIGH TEMPERATURES AND REFRACTORY MATERIALS

(MEETINGS OF 3-7 SEPTEMBER 1979)

1. The annual report on the Bibliography by Hocking was accepted. De Maria will consider how to incorporate thermochemical data sheets in future issues. A Collaborative Study Group will be formed by Alcock for the formation of a "IUPAC Thermochemical Data Bank."

2. The first paper on carbon characterization by Fitzer and Horton has been published in Pure & Appl. Chem. 51, 1561-1574 (1979). The subcommittee will prepare further publications, e.g. on terminology. The commission decided to request that the list of members of the Subcommittee on "Carbon and Graphite: Characterization and Terminology" be included in the IUPAC Membership Manual.

3. A shortened version of a report by Anthony on the sources of errors in the measurements of e.m.f.'s using solid oxide electrolytes will be submitted to Pure & Appl. Chem. Twelve laboratories will co-operate in an experimental study of these using electrolytes provided by 4 companies.

4. A paper with recommended values of the melting points of selected oxides by Hlavac was discussed and submitted for publication. A paper prepared for the commission by Coutures on lanthanide oxides will follow. A new collaborative study group will measure the m.p. of CaO.

5, (a) A critical assessment of data for the m.p., b.p., heats of fusion and evaporation of the alkali metals will be published by Ohse in Pure & Appl. Chem.
(b) Because of the technological importance of these metals he will edit a compilation of the most significant properties, including some recommended values to be published as a book by IUPAC. The collaboratory Study Group is transformed into a Task Force.

6. Two reports on characterization and analysis of SiC and Si_3N_4 were presented by Sersale. He will consider the implications of new techniques of sintering these ceramics on the conclusions of these reports.

7. The commission examined a paper by Rogl on Carbon-carbide entectics as secondary temperature standards. Komarek will form a collaborative study group to measure some of these systems.

8. A final report will be published in Pure & Appl. Chem. by Gilles on the use of Standard Reference Materials in vapour pressure measurements.

9. A new Preliminary Survey will be conducted by Mme. Anthony on thermionic properties of refractory materials.

10. The election of Titular Members was as follows: Gurvich will replace until 1981 Spilrain who has resigned.
New Titular Members are until 1983: Petzow and Rand
Elected Associate Members are: Alcock, Coutures, Metselaar (or Nat. Representative), Hocking.

11. Present: Titular Members: Prof. C. B. Alcock (chairman), Prof. G. D. Rieck (secretary), Mme. Dr. A. M. Anthony, Prof. G. De Maria, Prof. P. W. Gilles, Dr. J. Hlavac, Prof. K. Komarek.

Associate Members: Prof. E. Fitzer, Dr. W. S. Horton, Dr. R. W. Ohse, Prof. R. Sersale.

Guest: Dr. J. Corish (Ireland).

12. Next Meeting. The next meeting will be held in Antwerp, Belgium on June 27-28, 1980 at the time of the European Thermophysical Properties Conference.

III. ORGANIC CHEMISTRY DIVISION

COMMISSION ON NOMENCLATURE OF ORGANIC CHEMISTRY
COMMISSION ON PHYSICAL ORGANIC CHEMISTRY
COMMISSION ON PHOTOCHEMISTRY
COMMISSION ON MEDICINAL CHEMISTRY

ORGANIC CHEMISTRY DIVISION COMMITTEE

(MEETINGS OF 2,6 AND 7 SEPTEMBER 1979)

1. The minutes of the meeting in Warsaw, 12, 14 and 17 August, 1977, were approved.
2. The Report of the Division President to Council was approved.
3. A draft of Rules of the Division was adopted after minor modification.
4. Possibilities to reduce expenses of IUPAC were evaluated; the Committee opposed reduction in the frequency of General Assemblies and their fragmentation; the Committee approved reduction in its membership to nine for 1979-81 and requested Chairmen of Commissions to give serious consideration to reduction of their titular memberships for 1979-81 by one in each case.
5. The Reports of Commission III. 1-4 were approved. The following compositions of the Commissions for 1979-81 were approved:

	Titular	Associate
III.1	8	12
III.2	7	7
III.3	7	8
III.4	8*	7

* Contingent on reduction of titular membership to 7 for 1981-83.

6. Sponsorship and organization of symposia. The action of the President in approving sponsorship of symposia during the period since the Warsaw General Assembly was approved. The following applications for symposia were accepted:

XIII Natural Products: 1982 Pretoria, South Africa
XIV Natural Products: 1984 Poznan, Poland (Prof. M. WIEWIOROWSKI)
VI Physical Organic: 1982 Louvain-la Neuve, Belgium (Prof. BRUYLANTS)
IV Organic Synthesis:1982 Tokyo, Japan (Prof. T. MUKAIYAMA)
Organometallic Chemistry Directed to Organic Synthesis: 1981 Fort Collins USA (Prof. J.K. STILLE)

It was agreed that the projected symposia on Biomimetic Methods in Organic Synthesis be organized by Prof. R. BRESLOW (USA) in conjunction with the 28th IUPAC Congress, Vancouver, Canada, 1981.
It was also agreed that the inclusion of a section on Computers in Chemistry in the programme of the Vancouver Congress made unnecessary at this time the organization by the Division of a symposium in this area. The incoming President of the Division was asked to compose a set of guidelines regarding the technical and scientific requirements for symposia to be distributed to symposium organizers.

7. The Budget. Commission Chairmen are to submit their budgets to the President of the Division before September 15 for incorporation into an overall budget for the Division.
8. IDCNS Committee. The following Divisional representation was approved:
Prof. V. GOLD (expenses paid)
Prof. F.C. DE SCHRYVER (expenses not paid)

It was agreed that if a third Division representative were to be appointed, this should be done in consultation with the President of the Division and the Chairman of the appropriate Commission.

9. Dr. D.M. BROUWER reported on the procedings of the CHEMRAWN Committee, which he had attended as the representative of the Division. Members of the Division Committee expressed their wish to have continuing liaison with the CHEMRAWN Committee and also improved liaison with other organizations, such as UNESCO and WHO.
10. Membership, 1979-81. President: Prof. S. ITÔ; Past-President: Prof. P. YATES; Vice-President: Prof. J. MATHIEU; Secretary: Prof. G. MODENA; Members (1977-81): Prof. I.P. BELETSKAYA, Prof. J.F. BUNNETT, Prof. S. SAREL, Prof. J. WRÓBEL; New Member (1979-83): Prof. C.W. REES (UK); Coopted Members: Drs. D.M. BROUWER, K. HEUSLER, SUKH DEV, and H. TANIDA. New Coopted Members: Dr. W. KOCH (Switzerland), H. MUSSO, and S. GRONOWITZ (Sweden).
11. Next Meeting. This will take place during the 31st IUPAC General Assembly in Leuven, September,1981.
12. Present: Prof. P. YATES (President), Prof. H. ZOLLINGER (Past-President, Coopted Member), Prof. S. ITÔ (Vice-President), Prof. J. MATHIEU (Secretary), Prof. I.P. BELETSKAYA, Prof. J.F. BUNNETT, Prof. G. MODENA, Prof. H. MUSSO, Prof. R. RAPHAEL, Prof. S. SAREL, Prof. J. WRÓBEL (Members), Dr. D.M. BROUWER, Dr. SUKH DEV, Dr. H. TANIDA, (Coopted Members).
Present at part: Prof. J. RIGAUDY, (III.1; Chairman), Dr. J.R. PENTON (III.2; Secretary), Prof. K. SCHAFFNER (III.3; Chairman), Prof. F.C. DE SCHRYVER (III.3; Secretary), Dr. J.F. CAVALLA (III.4; Chairman), Prof. W.Th. NAUTA (III.4; Secretary), Dr. P. ENSLIN (South African National Committee, Chairman).

J. Mathieu
Secretary, 1977-79

Peter Yates
President, 1977-79

III.1 COMMISSION ON NOMENCLATURE OF ORGANIC CHEMISTRY

(MEETINGS OF 22-28 AUGUST 1979)

1) Reprinting of Nomenclature of Organic Chemistry, Sections A, B, C, D, E, F and H. The combined book has been reprinted by Pergamon Press and is now on sale.

2) Nomenclature of Organic Chemistry, Sections A, B, C, D, E, F and H (Revised Rules). The aim is to prepare a reorganized and more comprehensive manual for general organic nomenclature. An outline of this future edition has been discussed and approved. Meanwhile revised Sections or Sub-Sections will be prepared for publication in Pure and Applied Chemistry. For the present time, the Commission deals with the following items :

2a. Revision of the Extended Hantzsch-Widman System of Nomenclature for Heteromonocycles (Provisional Recommendations 1978). This document, corrected as agreed at the 1978 CNOC Meeting, has been published in the September 1979 issue of Pure and Applied Chemistry.

2b. λ Convention. A document based on the definition of λ in the revised (1979) version of Section D will be made before the next meeting.

2c. Revised Nomenclature for Free Radicals, Ions and Radical-Ions. A complete draft (1979) was reviewed. A revised document will be prepared before the next meeting.

2d. Stereochemistry (Section E). A Draft Contents of the revised E rules has been approved. The working group has considered proposals by Drs. K.R. HANSON and H. HIRSCHMANN on the definitions of conformation and configuration and maintained discussions with Dr. E. MEYER on the interpretation of CIP rules.

2e. Other documents to be prepared before the next meeting are on : general principles of name construction, parent hydrides, radicals as substituents of parent hydrides, and oxo acids.

A study to determine acceptable names for classes of compounds will be made.

3) Systematic Nomenclature (Section G). Documents on new nomenclature systems for the naming of "Fused Polycyclic Hydrocarbons" and of "Organic Substituents" have been discussed. A draft will be prepared dealing with the nomenclature of Phanes.

4) Abbreviations in Organic Chemistry. CNOC will compile a list of abbreviations that are to be abandoned and a short list of abbreviations that are to be kept.

5) Joint CNOC-CNIC Meeting. CNOC and CNIC met and discussed various topics or mutual interest. It was agreed to establish working groups with members from both Commissions on such topics.

6) The Naming of Straightforward Transformations (Draft 5 of Commission III.2). This document was reviewed and suggested changes have been sent to Prof. J.F. BUNNETT, Chairman of the Commission on Physical Organic Chemistry.

7) Membership. The Commission has proposed the following Titular membership : Prof. J. RIGAUDY (Chairman), Dr. G.P. MOSS (Vice-Chairman), Dr. W.H. POWELL (Secretary), Prof. O. ACHMATOWICZ, Prof. D. HELLWINKEL, Dr. K. HIRAYAMA, Dr. A.D. Mc NAUGHT, Prof. J.C. RICHER (Members). Special permission will be asked for keeping twelve Associate Members from mid-1979 onwards.

8) Next Meeting. In 1980, CNOC will meet in Cambridge University, England, for the period 2-9 September.

Present : Prof. J. RIGAUDY (Chairman), Mr. S.P. KLESNEY (Secretary), Dr. K. HIRAYAMA, Dr. K.L. LOENING, Prof. N. LOZAC'H, Dr. G.P. MOSS (Titular Members) ; Prof. O. ACHMATOWICZ, Dr. J.H. FLETCHER, Prof. D. HELLWINKEL, Dr. A.D. Mc NAUGHT, Dr. W.H. POWELL, Prof. J.C.RICHER, (Associate Members) ; Prof. R. PANICO (National Representative of France) ; Mr. E.W. GODLY (U.K.), Prof. Dr. R. LUCKENBACH and Dr. O. WEISSBACH (FRG, Beilstein Institut), Prof. P.A.S. SMITH (U.S.A.), Dr. H. GUTMANN (Switzerland), Prof. E. FLUCK (F.R.G.) (Observers).

III.2 COMMISSION ON PHYSICAL ORGANIC CHEMISTRY

(MEETINGS OF 4,5 AND 6 SEPTEMBER 1979)

J.R. Penton, Technisch-Chemisches Laboratorium
ETH-Zentrum, CH-8092 Zurich

1. Commission Membership

Prof. J.F.BUNNETT (Chairman), Dr J.R.PENTON (Secretary), Prof. V.GOLD, Dr J. TOULLEC (Titular members),and Prof. M.MIHAILOVIC (National representative) were reelected for a further two year period. The vacant Titular membership caused by the election of Prof. H.ZOLLINGER to the Presidency of the Union would not be filled. Prof. A.R.H.COLE (Associate member) had resigned, and Prof. M.P.DOYLE and Dr J.S.LITTLER were proposed as Associate members.

2. The Glossary of Terms Used in Physical Organic Chemistry

It was noted with satisfaction that the provisional version of the Glossary was now published in Pure and Applied Chemistry. A number of points for consideration in the final version were discussed.

3. The Naming of Transformations (5 Working Parties)

Draft No. 6 of "The Nomenclature of Straightforward Transformations: Substitutions, Additions, and Eliminations" could, with minor alterations, be submitted to the Division Committee for approval prior to consideration by IDCNS. It was gratifying to note that the proposed nomenclature system could be extended to cover multivalent transformations, oxidation-reduction transformations, and inter-and intramolecular cyclisations. The naming of pericyclic reactions was also considered.

The working party on the naming of complex transformations had identified the named reactions on the Chemical Abstracts List of Reaction Headings and, after other sources had been consulted, systematic names would be given to these reactions.

4. The Symbolization of Reaction Mechanisms (3 Working Parties)

It was decided that two of the nomenclature systems under consideration could be combined into one all-embracing scheme for use in indexing and information retrieval and, in a cut down form, for speech/writing purposes. A preliminary version would be available for discussion at the next meeting.

It was decided with regret that extension of the Ingold symbolism would be unpractical for the needs of physical organic chemists in the 1980's.

5. Date and Place of Next Meeting

The Commission proposed to meet on August 16th,17th,22nd, and 23rd,1980, in Santa Cruz, U.S.A. at the 5th IUPAC Conference on Physical Organic Chemistry.

III.3 COMMISSION ON PHOTOCHEMISTRY

(MEETINGS ON 4-6 SEPTEMBER 1979)

Six Titular and four Associate Members, one National Representative and four Observers met for 2½ days. The following topics were dealt with:

- Membership

Two Titular Members had resigned in 1979, and one new Titular Member is proposed for appointment , reducing thus the total membership to 7 Titular Members. One Associate Member, deceased in 1979, is proposed to be replaced by a new Associate Member, retaining thus the total membership of 8 Associate Members.

- Work on Projects.

1) Work on a Glossary of Quantities, Units and Symbols in Photochemistry was initiated (Coordinators: Z.R. Grabowski, K.N. Houk).
2) The 2nd draft of the Glossary of Terms in Photochemistry was reviewed and extensively supplemented (Coordinators: Z.R. Grabowski, K.N. Houk, K. Tokumaru as of Sept. 1979).The 3rd draft will be submitted to Commissions I.1, I.5, III.2, and V.4 for comments.
3) The Guidelines for Recording Experimental Data in Photochemistry (1st draft) were reviewed and extended. The 2nd draft will also be submitted to the above commissions within the next six months (Coordinators: A.A. Lamola, M. Wrighton).
4). Educational Aspects in Photochemistry: an inquiry among ca. 300 phǫtochemists was made concerning the teaching of photochemistry at their universities.. On the basis of the result recommendations will be formulated for an undergraduate curriculum in photochemistry (Coordinators: F. de Schryver, T. Mukai; K. Tokumaru as of Sept. 1979).
5) A new project on Reference Materials and Standards for Photophysical Procedures was initiated (Coordinators: M. Wrighton, F. de Schryver).

III.4 COMMISSION ON MEDICINAL CHEMISTRY

(MEETING OF 5 SEPTEMBER 1979)

1) Attendance. The meeting was attended by all 8 titular members, four associate members and eight observers.
2) Commission Membership. Prof. H. Timmerman (The Netherlands, 1977-1981) and Prof. C. G. Wermuth (France, 1977-1981) were elected titular members to replace Profs. Protiva and Sarel whose terms have expired. Prof. Mrs. Dr. B. Serafin (Poland, 1979-1983) was elected associate member.
3) Working Parties (W.P.). The Commission has five Working Parties:
   a) W.P. on Long Range Planning identifies future items to be dealt with by Commission and assumes a coordinating function for symposia seeking IUPAC sponsorship.
   b) W.P. on Education in Medicinal Chemistry (A) will prepare a follow-up report to Technical Report No. 13 describing the status of Medicinal Chemistry courses world wide.
   c) W.P. on Education in Medicinal Chemistry (B) will continue to define means whereby the study of Medicinal Chemistry can be extended into the Third World.
   d) W.P. on Quantitative Structure Relationships (QSAR), in cooperation with the QSAR Group of the E.F.M.C., will organise Summerschools in QSAR and continue to follow critically developments in the QSAR field.
   e) W.P. on Nomenclature in QSAR will prepare a "Glossary of terms used in QSAR".
4) Report on "Genesee Project". The Commission decided unanimously that commercial attempts to use QSAR for calculating toxicity data should be strongly discouraged.
5) Symposia in which the Commission is in some way involved.
   a) Symposia organised on the initiative of the E.F.M.C.: VIIth International Symposium on Medicinal Chemistry September 2-5, 1980, Torremolinos, Spain. The VIIIth Symposium will be held in 1984 in Sweden and the IXth in 1986 in West Berlin (GFR).
   b) On June 20-24, 1982 the North American Medicinal Chemistry Symposium will be organised by ACS and CIC at Toronto (Canada).
   c) The Medicinal Chemistry Division of the Royal Netherlands Chemical Society (KNCV) will organise a Symposium on the Strategy of Drug Research on August 25-28, 1981, at Noordwijkerhout (The Netherlands).
6) Next Meeting. The next meeting of the Commission will take place on the occasion of the VIIth International Symposium on September 1, 1980 at Torremolinos, Spain.

IV. MACROMOLECULAR DIVISION

COMMISSION ON MACROMOLECULAR NOMENCLATURE

COMMISSION ON POLYMER CHARACTERIZATION AND PROPERTIES

MACROMOLECULAR CHEMISTRY DIVISION COMMITTEE

(MEETINGS OF 2-7 SEPTEMBER 1979)

1. Members of the Division stood in silence to the memory of Prof. Giulio NATTA, Nobel Laureate 1963.

2. Minutes of previos meeting

The minutes of the Committee Meeting held in London, 29 August 1978 (see IUPAC Inf. Bull. (1978). No. 3, pp. 199-200) were approved.

3. Current status of IUPAC sponsored sympsoia.

Two symposia held in 1979 and eight 1980 symposia to deal with polymers were discussed.

1981:

- 27th International Symposium on Macromolecules, Strasbourg (France), 6-9 July. Sponsorship of the symposium to be held under the chairmanship of Prof. H. BENOIT was approved by the Committee. Fifteen themes will be proposed in two main sections ; Macromolecular Chemistry and Polymer Materials. A first circular would be issued shortly.

- International Symposium on Advances in Polymer Characterization, Durham (U.K.)13-17 July.

Sponsorship of the Symposium was provisionally approved subject to more detailed information on programme and list of speakers. Prof. BAMFORD would be able to supply this information after the forthcoming meeting of the Macro Group (U.K.), organizer of the Symposium.

- 22nd Microsymposium : Characterization of dynamic and geometrical structure of polymer systems by NMR Spectra, Prague (Czechoslovakia), July.

IUPAC sponsorship was approved on the condition that the syposium would not be held at the same time as the Strasbourg or the Durham syposium. End of July was recommended as the most appropriate period.

- The Association of Greek Chemists would be interested in organizing a IUPAC sponsored symposium in Athens at the end of June. Sponsorship of a syposium on "Structure-Property-Processing-Relations in Polymers" under the scientific responsibility of Prof. J.C. SEFERIS and Dr. A.J. de VRIES was provisionally approved subject to more information on the programme. The Division Committee would be favorable to sponsorship of a meeting in Athens on "Biopolymers" only if organized as a seperate syposium.

1982:

- Sponsorship of the 28th International Symposium on Macromolecules to be held in the U.S.A. was approved. Exact date and place of the Syposium would be announced after the final decision of the U.S. National Committee.

- International Syposium on Polymerization of small Heterocycles and Aldehydes, Jablonna or Krakow, Poland.

Sponsorship of the symposium, to be organized by Prof. Z. JEDLINSKI was provisionally approved on the condition that its date would not coincide with the 28th International Syposium to be held in the U.S.A.

- After some discussion it was decided to change item 5 of the recommendations for

organizing committees of IUPAC sponsored symposia on macromolecules, as follows: "Large multi-topics symposia should be held at least every other year".

4. Proposal for Experimental Modification of IUPAC Organizational Structure.

The U.S. National Committee's proposal to undertake a trial evaluation in the Macromolecular Division of its project to change IUPAC Divisions into Membership Organizations, was extensively discussed after some preliminary explanations by Prof. OVERBERGER who also offered his aid in case the Division was willing to undertake the experiment.

It was unaminously agreed that Prof. KABANOV would report to the Bureau that the Division was not willing to start this particular experiment but that any new ideas or suggestions would always be taken into serious consideration.

5. Proposals for improving financial situation of IUPAC.

Prof. KABANOV had transmitted to Prof. ZOLLINGER (Jan. 1979) the suggestions of those Division Members who had replied to his request. The Division Committee agreed on the following recommendations:

- since the Macromolecular Division has only 2 commissions, it is undesirable to reduce the number of commission members,

- if Working Party chairmen are to be maintained as Titular Members of Commission IV-2, it would be unreasonable to limit the number of titular members of IV-2,

- the number of Committee members may be reduced but it is undesirable to reduce the total number of Division Members (Committee + Commissions),

- in non-general assembly years Commission meetings will be held as far as possible immediately before or after a scientific syposium related to their interests ; committee meetings may be held informally during the week in which an International Syposium is taking place,

- during a General Assembly the Committee might meet only once after all Commission meetings have been held,

- if travel support is to be reduced, it should be done only on a percentage basis.

6. Education and Training in Polymer Science and Technology.

- It was generally agreed that Prof. SHELDON'S revised report should be considered as a first but still incomplete tentative to review the present situation in the world. Prof. BAMFORD would submit the report to Dr. GELLENDER for publication in "Chemistry International" minor modifications would still be acceptable if received by Prof. BAMFORD before the end of September.

All members and National Representatives were asked to provide updated information on the situation in thier respective countries in view of publication of a more complete document to be prepared by the Division.

7. News Bulletin of Macromolecular Division.

In view of the excellent coverage of the Division's activities by the IUPAC Information Bulletin (new title ; Chemistry International) it was agreed to discontinue publication of a News Bulletin in 1979.

8. Relations and Collaboration with other organizations.

Prof. KABANOV and Dr. de VRIES reported on their discussions with Dr. PARKANY of ISO.

Possible means for improving relations and collaboration between ISO and the Macromolecular Division had been considered (early involement of IUPAC in the elaboration of ISO documents, invitations of IUPAC experts to attend ISO meetings, etc.) and definite proposals from ISO were to be expected.

9. Changes in Membership.

Professors HOECKER (F.R.G.) SAEGUSA (Japan), STILLE (U.S.A.), VALVASSORI (Italy) and TEYSSIE (Belgium) were elected member for the period 1979-1983.

Coopted Members elected or re-eclected were : Professors CORRADINI,NAKAJIMA, PEPPER, SCHULTZ, TUDOS and Drs. HEINZE, KEPES, MARCHESSAULT, WINSLOW (1979-1981).

10. Budget.

In view of the increasing activities of Commission Iv-2 (creation of new Working Parties), it was recommended to ask the Bureau for extra funds ; $ 5750 in 1980 and $ 6250 in 1981.

11. Date and Place of next Meeting.

It was agreed to hold an informal Committee Meeting in Sept.1980 during the Florence Synposium. One of the main items of the agenda would be the elaboration of election procedures for Committee and Commission Members.

IV.1 COMMISSION ON MACROMOLECULAR NOMENCLATURE

(MEETINGS OF 3-6 SEPTEMBER 1979)

At its meeting in Davos on 3-6 September 1979, the Commission adopted certain substantive changes and additions to its Provisional Document (Pure & Appl. Chem. 51, 1101-21 (1979)) on Stereochemical Definitions and Notations Relating to Polymers, and it completed its review of a document on Inorganic Polymer Nomenclature prepared in collaboration with Commission II.2; this document is considered to be ready for final drafting. The Commission is continuing its work in the areas of (a) copolymer nomenclature, (b) substitutive nomenclature for polymers, (c) polymer classification, and (d) basic terms related to polymer physics.

The Commission recommended that I. Mita, P. Kratochvil, and I.M. Papissov be appointed to titular membership, and that S. Penczek and U. Suter, as well as retiring members R.B. Fox, N.A. Plate, and T. Tsuruta, be appointed to associate membership. N.M. Bikales was elected secretary.

The next meeting of the Commission will be held in the area of Florence, Italy, at some time during the week of 14-20 September 1980.

IV.2 COMMISSION ON POLYMER CHARACTERIZATION AND PROPERTIES

(MEETING OF 3 SEPTEMBER 1979)

The executive had agreed an increase to eight Titular and up to eight Associate Members and approved the following new Titular Member; R.E.Wetton (Secretary); D.T.Clark (Chairman W.P.6); G.Hinrichsen (Chairman W.P.4.); G.Eastmond (Chairman W.P.5). The following were elected to Associate Membership; G. Allen, C.H.Bamford; G.Becker and H.H.Meyer. National representatives are T.Kelen (Hungary) and P.Szewczyk (Poland).

Reports of Working Parties were presented as follows :

W.P.1. Dr.Clegg reported expansion of members and activities. Two reports had been published in PAC:- "The effect of Molecular Orientation on the Mechanical Properties of Rubber-modified Poly(styrene)" - Sept '78 and "Mechanical Properties of Rigid PVC - Effect of Fillers" - May '79. Two further manuscripts had been submitted.

W.P.2. Dr. Scholte reported continuing progress with characterization of poly(olefins) and attention was now focussed on new detection methods for GPC to aid determination of branching and expansion to other polymers. Published paper "Molecular Characterization of Poly(ethylene)" - PAC 1978.

W.P.3. Mr. Fink-Jensen Three main projects are in hand.

(a) Analysis of functional groups in amino resins. (a literature review published in Progress in Organic Coatings - May 1978)

(b) Adhesion - published reports - "Experimental Aspects of Adhesion Testing" - 1978. "Adhesion Testing with the Tear-off Method" - 1979.

(c) Literature retrieval.

New Working Parties reported progress as follows :-

W.P.4. G.Hinrichsen Thermal Properties - Little progress.

W.P.5. G.Eastmond Kinetic Parameters - Five Companies had agreed to participate in producing reliable data on radical polymerization.

W.P.6. Prof.Clark Surface Properties - Eight laboratories had agreed to participate in an exercise to characterize a 'standard' polymer surface. Four laboratories (to date) were co-operating in studying fibre surfaces.

Future Work All working parties were encouraged to continue with the proviso that Prof. Clark would report back on areas of overlap between 3 and 6.

In order to involve Japan and Eastern Europe, sub-groups would be established in these geographical areas whenever possible.

Action was taken to initiate a new sub-group on Elastomer Characterization under Dr. Scholte's W.P. Prof. Mandel agreed to bring forward a paper on Characterization of Poly(electrolytes) to the next meeting.

A report on RILEM activities on polymer ageing was presented by Mr. Ammar.

Other Matters The Commission requested the listing of all IUPAC publications in 'Chemistry International'. Minimal funds to allow the progress of working parties and other activities were agreed and the Chairman would make representations.

Next Meeting 14th and 15th September, 1980 (probably Naples).

V. ANALYTICAL CHEMISTRY DIVISION

COMMISSION ON ANALYTICAL REACTIONS AND REAGENTS

COMMISSION ON MICROCHEMICAL TECHNIQUES AND TRACE ANALYSIS

COMMISSION ON ANALYTICAL NOMENCLATURE

COMMISSION ON SPECTROCHEMICAL AND OTHER OPTICAL PROCEDURES FOR ANALYSIS

COMMISSION ON ELECTROANALYTICAL CHEMISTRY

COMMISSION ON EQUILIBRIUM DATA

COMMISSION ON ANALYTICAL RADIOCHEMISTRY AND NUCLEAR MATERIALS

COMMISSION ON SOLUBILITY DATA

ANALYTICAL CHEMISTRY DIVISION COMMITTEE

(MEETINGS OF 2 AND 7 SEPTEMBER 1979)

All members of the Division Committee were present except Prof. G. H. Morrison and co-opted member Prof. Malissa, who sent their apologies. The deaths of Profs. V. N. Kondratiev, G. Schwarzenbach, M. Gshibashi, and S. Amiel were noted with deep regret and a moment of silence observed to their memory.

Election of New Officers and Committee Members: Prof. West announced that Prof. F. Pellerin has been elected Vice President for the term 1979-81 and Dr. J. C. White has been reelected Secretary for the term 1979-83. Dr. White announced the results of the Division Committee election:

Prof. R. G. Bates, USA	1979-83
Prof. T. Fujinaga, Japan	1979-83
Prof. M. Grasserbauer, Austria	1979-83
Prof. A. Hulanicki, Polant	1979-83
Prof. Yu. A. Zolotov, USSR	1979-83

The Nomination/Election Committee for 1979-81 was selected: Prof. G. Guilbault, USA, chairman; Mr. R. W. Fennell, UK; and Prof. G. Duyckaerts, Belgium.

Co-opted members for 1979-81 were selected: Profs. H. Hulpke, FRG, reelected; H. Malissa, Austria, reelected; H. Freiser, USA; E. Pungor, Hungary; N. Tanaka, Japan; and Dr. A. C. Dockerty, UK.

Division Finances: The Division finances were discussed and the requested budget of $26,500 for 1980 and $6,000 for 1981 was reported.

Statutes, Bylaws and Division Rules: The Division Committee approved the Rules of the Division for submission by President West to the Bureau and Council at the Davos meeting for ratification. Operating guidelines for the Division were adopted.

USA Proposal for Individual Memberships in Analytical Chemistry Division: The proposal by the USA to include individual memberships in the Division was discussed at length. The Committee approved a resolution opposing the proposal and directed President West to present the reply to the Bureau for their review.

Reduced Memberships of Commissions: The Committee agreed to a proposal from the Bureau to reduce the number of Titular Memberships from eight to seven per Commission as requested. The Committee decided to limit Associate Members to twelve per Commission.

Proposed New Commission on Solubility Data: The Committee approved the proposal for creation of a new Commission on Solubility Data, V.8, and directed President West to present the proposal to the Bureau and Council for ratification at Davos.

Division "Think Tank" Group: The Division Committee discussed in detail the report by the "Think Tank" Working Group (Profs. Pungor, Freiser, and Nurnberg). The purpose of the group is to prepare terms of reference that will keep activities of the Division current. In view of the excellent proposals of this group, it was decided to continue the arrangement with Prof. Nurnberg as chairman, Profs. Grasserbauer, Freiser, and Pungor as members.

Intercommission Project on Trace Elements in Natural Waters: The Division Committee adopted the intercommission project and requested the various commissions to plan their participation for a trial period of two years at which time an interim progress report will be prepared. Coordinators from each Commission were named by their respective Commissions; Prof. West will assume chairmanship for the initial stages of this project.

New Project: Multilingual Dictionary of Analytical Terms, resulting from the "Think Tank" group report was approved, with Prof. E. Pungor in charge. Languages to be included are English, French, German, Japanese, Spanish, and Russian. The members of the working group would be agreed in due course between Prof. Pungor and the Division Executive Committee.

Position of Nuclear Chemistry in Commission V.7: A request from Commission V.7 to drop Nuclear Chemistry from its terms of reference in view of the total inactivity of this project by the Titular Members involved was approved. Prof. West will report this action to the Bureau for their approval.

Representation on IDCNS: Prof. N. Tanaka was selected as the candidate of the Division to IDCNS for appointment by the IUPAC President. Prof. H. Freiser was chosen as the second representative.

Other Business: Discussion was held on the matter of IUPAC sponsorship of meetings of analytical societies. Problems in conflicting dates and topics were noted. The Committee decided to ask Prof. Morrison to chair a group with representatives from Europe and Japan to coordinate actions so that conflicts can be resolved and to recommend specific meetings for sponsorship to the Division Executive Committee for their submission to IUPAC.

Collaboration with FECS on their symbolism project was recommended for continuation with participation from as many Commissions as possible.

Prof. Freiser reported on the progress of his project, "Manual of Analytical Nomenclature." His working party was revised so that it is now composed of Profs. Freiser, Belcher, Hume, Irving, and Macdonald. Prof. Pungor was co-opted as a corresponding member to the Multilingual Dictionary project.

Programs of the Commissions: The programs of the seven Commissions were reviewed and approved. The new Commission to be approved at Davos on Solubility Data was also reviewed by Prof. Kertes, Commission Chairman. He reported that three volumes have been published and eight additional volumes are expected to be completed in 1979. For 1980 and 1981 each, eight volumes are planned, for a total of twenty-seven.

Membership Rosters of Commissions: The membership rosters presented by the Commission Chairmen were reviewed and approved for submission to the Bureau. Six new chairmen will assume office in 1979; seven new secretaries. The selection of Prof. Crespi by V.7 as a Titular Member was questioned and Bureau advise will be sought by Prof. West.

Budgets for 1980-81: President West discussed the proposed budget for 1980 and 1981 with each Commission and gave them the tentative budgets he would submit to the Treasurer in order that they might plan their activities for the next two years. The actual level of activity would depend very much on the funds granted to the Division by the Union.

President West expressed the appreciation of the Division to the outgoing members for their dedicated service to the Union. These were: Past President Tanaka, and members Duyckaerts, Freiser, Pungor, and Savvin.

The next meeting of the Analytical Chemistry Division Committee will be held during the 31st General Assembly, Louvain, Belgium, in August 1981.

V.1 COMMISSION ON ANALYTICAL REACTIONS AND REAGENTS

(MEETINGS OF 3-6 SEPTEMBER 1979)

1/ Projects finishing. It was agreed to send the following completed reports to Division Committee for approval their publication:

/a/ Recommendations on Publication of Papers based on Ion Exchange

/b/ Colorimetric and Fluorimetric Determinations of Amines

2/ Projects in progress. After discussion of the following papers modifications, revisions or improvements were suggested:

/a/ Collected Data of Complexometric Indicators. Part I.

/b/ Identification and Purity Control of Acid-Base Indicators.

/c/ Determination of Polyphenols. Part I. Gallic Esters.

/d/ Determination of Trace Metals in Food Additives

Concerning the following papers new drafts are to be prepared:

/e/ Determination of Organotin Compounds

/f/ Amplification reactions

/g/ Selectivity Terms used in Chemical Analysis.

3/ New projects.

/a/ Critical Survey of Spectrophotometric and Fluorimetric Methods Used in Water Analysis. It was decided to undertake this project as a contribution to the Division project: Trace Metals in Natural Waters, which was wellcomed unanimously

/b/ Collected Data on Complexometric Indicators. Part II. Azo Dyes.

/c/ Collected Data on Complexometric Indicators. Part III. Other Dyes.

Both /b/ and /c/ are subsequent parts of the project originally planned for all types of complexometric indicators.

/d/ Determination of Polyphenols. Part II. Antioxydants Other than Gallic Esters.

4/ Commission memberships. It was agreed to recommend that J. Inczédy become chairman and G. den Boef Secretary /1979-1983/. S.B. Savvin become titular and J. Buffle, G. Duyckaerts, M. Guernet, A. Hulanicki, F. Ingman associate members. The memberships of the following persons terminated: YU.A. Bankovski, N. Jordanov, F. Pellerin, H.F. Walton, M. Kapel.

5/ Next Meeting. This will take place in Veszprém /Hungary/, on Sept. 1st and 2nd, 1980, after the Microanalytical Conference /Graz/.

6/ Present: A. Hulanicki /Chairman/, J. Inczédy /Secretary/, R. Belcher, G. den Boef, G. Duyckaerts, M. Kapel, F. Pellerin, S.B. Savvin, W.I. Stephen, D. Thorburn Burns, E. Wänninen and I. Hertz /Observer/.

V.2 COMMISSION ON MICROCHEMICAL TECHNIQUES AND TRACE ANALYSIS

(MEETINGS OF 4-6 SEPTEMBER 1979)

1) Commission Membership. The following recommendations were made. Chairman: Prof. G. TÖLG, owing to the election of Prof. GRASSERBAUER to the Division Committee. Secretary: Dr. A. TOWNSHEND. Dr. PINTA's and Prof. GOMIŠČEK's terms as titular members had expired. The terms of Prof. MIZUIKE and Dr. TERENT'EVA to be extended for two years, and that of Prof. TÖLG until 1983. Prof. JACKWERTH and Dr. GRIEPINK to be promoted to titular members. Prof. ZOLOTOV's and Dr. KOCH's terms as associate members had expired. The following were proposed as associate members: Dr. D.H.J. CHRISTIE, Prof. N.P. ILYIN, Dr. A. LAMOTTE and Prof. GRASSERBAUER for four years, Prof. GOMIŠČEK and Dr. PINTA for two years. Prof. A.D. CAMPBELL, Prof. W. KEMULA and Prof. J. JANÁK were confirmed as National Representatives until 1981.

2) Reports Completed. The following reports had been published, other than that marked (*), which has been submitted to the Division Committee for approval.

General Aspects of Trace Analytical Methods III: Contamination in Trace Analysis (MIZUIKE and PINTA) PAC, 50 (1978) pp. 1519-1529.
IV: Recommendations for Nomenclature, Standard Procedures and Reporting of Experimental Data for Surface Analysis Techniques (MORRISON, GRASSERBAUER and CHENG)
*VI: Applicability of Pressurized Sample Dissolution in Trace Analysis of Biological Materials (GOMIŠČEK)

3) Current Projects. The following projects were discussed extensively:

General Aspects of Trace Analytical Methods V: Stability of Synthetic Standard Solutions (GOMIŠČEK and TÖLG). Project completed.
VII. Practical Limits of Determination of Trace Analytical Methods (KOCH, MORRISON and LA FLEUR). Report approved subject to revision.
VIII: Standardization in Organic Trace Analysis (LA FLEUR). A detailed proposal was required by the end of 1979.
IX: Evaluation of Analytical Methods for Determination of Trace Elements in Biological Materials (TOWNSHEND, TÖLG, GOMIŠČEK, OTTAWAY, MARCZENCO and CAMPBELL). The first part of the project was to be limited to the determination of Co, Cr, Mo, Ni, Se and Tl in soft tissues and body fluids, including sampling, sample decomposition, separation and pre-concentration.
Recommended Methods for Reporting Accuracy and Precision (LA FLEUR). Owing to overlap with other commissions, the project was terminated.
Recommended Methods for Pressure Decomposition (GOMIŠČEK and TÖLG). Owing to rapid developments, it had been necessary to extend the report.
Graphical Representation of Trace and Microanalytical Schemes (TÖLG). The Commission was collaborating with the Analytical Working Party of the FECS. It was decided to collect, devise and standardize iconical symbols on a wide basis, and use them for a trial period for presentation of abstracts.
Recommendations Concerning In-Situ Microanalytical Methods (GRASSERBAUER, MORRISON and HEINRICH). A preliminary report containing recommendations for methods and symbols, quantification procedures, and reporting of experimental data was presented and approved.
Trace Analysis of Microsamples (PINTA, OTTAWAY and TÖLG). The Commission decided that the project should involve a critical survey of the methods available, and emphasize strategic aspects.
Organic Elemental Microanalysis by Physical Methods (TERENT'EVA). A preliminary report was discussed. The Commission asked for the inclusion of more data on accuracy, precision, range of elements, quantification and standardization.

4) New Projects. It was agreed to start work on the following four new projects:

Separation and Preconcentration of Trace Substances II. Multielement Preconcentration by Precipitation of the Matrix (JACKWERTH).
III. Flotation as a Preconcentration Technique (MIZUIKE).

Parameters of Interest for Standards in In-Situ Microanalysis (HEINRICH, GRASSERBAUER and TÖLG). This will emphasize strategies for developing and testing standard reference materials for in-situ microanalysis.
Determination of Trace Elements in Natural Waters (Division Project) (GRIEPINK, MARCZENKO, MIZUIKE, OTTAWAY and TÖLG). The Commission was prepared to collaborate with experts in other Commissions dealing exclusively with methodological aspects, and agreed that in practical analysis, sampling, sample-pretreatment and determination cannot be considered in isolation.

5) Other Business. The proposition of the Division to prepare a Manual of Nomenclature of Analytical Chemistry was supported. The Commission would provide nomenclature for in-situ microanalysis and surface analysis.

Present: M. GRASSERBAUER (Chaiman), A. TOWNSHEND (Acting Secretary), A. MIZUIKE, E.A. TERENT'EVA, G. TÖLG, (titular members), B. GRIEPINK, K. HEINRICH, E. JACKWERTH, Z. MARCZENKO, (associate members), A.D. CAMPBELL (National Representative, New Zealand), M. POCHON (Observer, Switzerland).

V.3 COMMISSION ON ANALYTICAL NOMENCLATURE

(MEETINGS OF 3-6 SEPTEMBER 1979)

1) Sessions Held. The Commission conducted three normal V. 3 only sessions, plus held five joint meetings with Commission V. 1 (ion exchange), V. 4 (luminescence), V. 7 (nuclear analysis), the Commission on Automation of the Section of Clinical Chemistry (automated analysis), and the Commission on Teaching of Chemistry (atomic weights), over the four day period September 3-6, 1979.

2) States of Projects. One new project was added (joint with V. 4 on Preparation of Samples for Spectroscopic Analysis), one project (Exchanging Sorbents) was dropped, and the titles of two project changed (Nomenclature of Nuclear Analysis and Nomenclature of Chromatography, the latter broadened to include Gas as well as Liquid Chromatography). It was decided to direct future efforts of the commission to projects of importance to the forthcoming Manual. Several commission members will also participate significantly in Division projects: (1) the Dictionary-Svehla ; (2) Trace Elements-Frei; (3) Manual-Freiser, Irving, Zettler.

3) Commission Membership. A new chairman (G. Guilbault) and secretary (G. Svehla) were elected, as were two new titular members (R. Frei and W. Simon) and two new associate members (C. A. M. G. Cramers of Eindhoven and R. van Grieken of Antwerp).

4) Next Meeting. The next meeting of the Commission will be held in London on Monday, December 15, 1980, and all members are expected to attend.

5) Present. H. Zettler, G. Guilbault, H. Freiser, G. Svehla, R. Frei, H. Irving, N. Rice, W. Simon, A. Townshend.

V.4 COMMISSION ON SPECTROCHEMICAL AND OTHER OPTICAL PROCEDURES FOR ANALYSIS

(MEETINGS OF 3-6 SEPTEMBER 1979)

1) Project on Radiation Sources (Part V). The progress of this project has been greatly accelerated by means of a series of mini-meetings. A final draft of the document was accepted and passed to the Division Secretary for publication as a preliminary report.

2) Project on Molecular Luminescence Spectroscopy (Part VI). The final draft of this document was discussed and accepted at a joint meeting with Commission V.3. The document has now been passed to the Division Secretary for publication as a preliminary report.

3) Project on Optical Molecular Absorption Spectroscopy - UV and Visible (Part VII). A draft report was discussed at a joint meeting with CQUCC. Several minor changes were suggested and CQUCC agreed to delegate one of three members to work with V.4 on a revised version.

4) Two projects under pre-evaluation were accepted as full projects:

   (a) Part VIII, Nomenclature System for X-Ray Wavelengths

   (b) Part IX, Instrumentation for Dispersion and Isolation of Optical Spectra

5) Membership of the Commission - The following appointments were made:

Chairman until 1981:	Dr. Robin
Associate member to titular member:	Dr. Zander
Titular member to associate member:	Dr. Müller
New associate members:	Dr. Mermet, Dr. Senemaud and Prof. Grabowski
Re-elected associate members:	Prof. Alkemade
Re-elected titular members:	Dr. Laqua, Dr. Melhuish and Dr. Strasheim
National Representatives (to 1981):	Dr. Zimmer (Hungary) & Dr. Pszonicki (Poland)

6) New Projects. Several new projects were proposed for pre-evaluation:

   (a) Sample preparation: Commission V.3 will be approached with a view to forming a joint venture.

   (b) Determination of Trace Elements in Natural Waters: Following a Divisional request for cooperation in this project, it was decided to drop our potential project on Spectroscopic Quantitation for Low Levels of Environmental Pollution.

   (c) Atomic Transition Probability Data: This task will be concerned only with Atomic Spectroscopy.

V.5 COMMISSION ON ELECTROANALYTICAL CHEMISTRY

(MEETINGS OF 3-6 SEPTEMBER 1979)

1. Minutes of Previous Meetings. The minutes of the meeting in Warsaw on 13-16 August 1977 (see Comptes Rendus 29th IUPAC General Assembly, IUPAC Inf. Bull. 1978, No. 2, pp. 109-110), of the liaison meeting with I.3 held in Paris in 1978, and of the subcommittee meeting on standard pH scales held in Gainesville, Florida, USA, were approved.

2. Reports. Seven reports had been published in final form since the Warsaw Conference: Pure Appl. Chem. 49 (1977), pp. 877, 885; 50 (1978), pp. 587, 1701; 51 (1979), pp. 1159, 1175, 1575. Two other reports were in press and seven reports were approved by V.5 for publication and would be submitted to the Division Committee for final approval.

3. Continuing Projects. (i) Applications and Potentialities of Electroanalytical Techniques in Environmental Analysis (NÜRNBERG), (ii) Recommendations on Reporting of Electroanalytical Data (MEITES), (iii) Buffer Solutions for Testing Glass Electrodes at High Temperatures (COVINGTON, BIRCH), (iv) Compilation of Dissociation Constants of Carboxylic Acids in Media of High Ionic Strength (NÜRNBERG), (v) Indicator Electrodes in Nonaqueous Solvents (COETZEE, JUILLARD), (vi) Determination of Trace Elements in Natural Waters (BATES, COVINGTON, FUJINAGA, NÜRNBERG, PUNGOR, BUFFLE), (vii) Purification of Nonaqueous Solvents and Tests for Impurities (COETZEE), (vii) Electroanalytical Chemistry of Sulfur Compounds in New Coal Conversion Technologies (JORDAN), (ix) Critical Review of Individual Electroanalytical Techniques (MEITES), (x) Half-Wave Potentials of Organic Depolarizers in Hexamethylphosphoramide (FUJINAGA, IZUTSU, SENDA), (xi) Response Times of Ion-Selective Electrodes and Potentiometric Cells (PUNGOR), (xii) Recommendations for Reporting Characteristic Potentials for Nonaqueous Solvents (MEITES), and (xiii) revision of Latimer's Oxidation Potentials (JORDAN, jointly with BARD and PARSONS of I.3). It is to be noted in particular that item (vi) is a continuing project which has been greatly expanded in response to the suggestions of the Division Committee to devote special attention to this important field.

4. New Projects. In order to avoid overlap with activities of other Commissions, projects judged to be of common interest were discussed with the appropriate Commissions. Such projects are identified by asterisks. (i) *Thermodynamic Constants for Individual Ionic Species (MARCUS, MUSSINI, discussed with V.6), (ii) Voltammetry at Glassy Carbon Electrodes (JORDAN, GROSS), (iii) Electroanalytical Chemistry of Drinking and Domestic Waste Waters (NÜRNBERG, PUNGOR, BUFFLE), (iv) Ion-Selective Electrodes in Nonaqueous and Mixed Solvents (IZUTSU, PUNGOR), and (v) Assessment of the Status of Spectroelectrochemistry (DURST).

5. Liaison with Other Commissions. Joint meetings were held with Commissions I.3 and V.6. Several topics of mutual interest were discussed. Among these were the revision of Latimer's Oxidation Potentials, and the relative merits of different pH scales. Further information is given in the detailed minutes of the Commissions involved.

6. Membership. Prof. BATES had been elected to the Division Committee, and Prof. GALUS retired as Titular Member. Profs. COETZEE and JORDAN were elected as Chairman and Secretary, respectively. Other changes in membership were: Prof. PUNGOR and Dr. JUILLARD were elected as Titular Members, while Profs. GROSS, KADISH, MARCUS, MUSSINI, NÜRNBERG, SENDA, SMITH and TANAKA, and Dr. DURST, were elected as Associate Members. New National Representatives were Profs. GALUS (Poland) and PURDY (Canada), and Drs. BIRCH (United Kingdom) and TOTH (Hungary).

7. Next Meeting. It is planned to hold an interim meeting of a subcommittee on the trace analysis projects of the Commission during 1980, probably in Jülich, FRG. The exact date is to be decided later.

8. Present: Prof. R. G. BATES (Chairman), Prof. J. F. COETZEE (Secretary), Dr. A. K. COVINGTON, Prof. T. FUJINAGA, Prof. Z. GALUS, Prof. K. IZUTSU, Prof. J. JORDAN and Prof. R. C. KAPOOR (Titular Members), Dr. R. KALVODA and Prof. P. PAPOFF (Associate Members), Dr. B. BIRCH and Prof. N. TANAKA (National Representatives), and Profs. A. H. GUERRERO and T. MUSSINI and Dr. J. BUFFLE (Observers).

V.6 COMMISSION ON EQUILIBRIUM DATA

(MEETINGS OF 2-6 SEPTEMBER 1979)

1) Present: G.H. Nancollas (Chairman), S. Ahrland (Secretary), G. Anderegg, M.T. Beck, H.L. Clever, S. Kertes, Y. Marcus, H. Ohtaki, D.D. Perrin, L.D. Pettit, M. Salomon, J. Starý, C.L. Young, A.F.M. Barton (national respresentative), R.D. Cannon (observer).

2) Stability constants of metal ion complexes. Second supplement to the section of organic ligands, compiled by D.D. Perrin, has been published 1979. The volume, 1263 p., covers 1969-1973. W.A.E. McBryde will compile a third supplement, covering up to 1979. Second supplement to the section of inorganic ligands, compiled by E. Högfeldt, is planned for publication 1980. - The present manual handling of the data has become difficult to manage. A computer based storage and retrieval system would present great advantages. The possibilities of introducing such a system will be investigated.

3) Ionization constants of acids and bases. First supplement to the organic acids, compiled by E.P. Serjeant and B. Dempsey, has been published 1979. With this volume, 989 p., the literature is covered up to, and including, 1970. D.D. Perrin, E.P. Serjeant and B. Dempsey will compile a second supplement, covering the whole field of acids and bases up to 1979.

4) Critial surveys of formation of metal complexes. Five surveys have by now been published, two of these treating liquid-liquid distribution equilibria. Guidelines will be prepared for critial surveys of metal complex equilibria of biological interest.

5) Equilibrium data for interactions between trace metals and ligands in natural waters. This program is part of the large intercommission project on trace elements in natural waters launched by the Analytical Chemistry Division. The Commission will mainly deal with aspects related to equilibrium data and speciation of important trace metals in waters of various composition: strongly saline, brackish and fresh. Meeting of the members immediately concerned foreseen for spring 1980.

6) Solubility data. To handle this vast project, a new Commission has been formed which will take over the tasks of the former Subcommittee on Solubility Data.

7) Membership. G.H. Nancollas was reelected chairman and D.D. Perrin titular member for 1979-1981, subject to approval of the Bureau. L.D. Pettit and W.A.E. McBryde were elected titular members for 1979-1983; A.S. Kertes and J. Starý associate members for 1979-1981.

8) Next meeting will take place at the General Assembly at Löwen, August 1981.

V.7 COMMISSION ON ANALYTICAL RADIOCHEMISTRY AND NUCLEAR MATERIALS

(MEETINGS OF 4-6 SEPTEMBER 1979)

1) Present. R. E. WAINERDI (Chairman), N. SAITO (Secretary); M. DE BRUIN, F. LUX, T. A. RAFTER, M. SANKAR DAS and E. STEINNES (Members); A. C. DOCHERTY and B. F. MYASOEDOV (National Representatives); M. A. LEONARD and A. F. WILLIAMS (Observers).

2) Project reports cleared. (i) Reference Materials for Trace Analysis by Radioanalytical Methods: U. S. Geological Survey Rock Standards (STEINNES and KOSTA). (ii) Teaching Aspects of Radioanalytical Chemistry and the Analysis of Nuclear Materials (DE BRUIN).

3) On going projects. It was agreed that the following projects be continued in view of satisfactory progress: (i) Survey of the Radioanalytical Problems Associated with Fusion Reactors (CRESPI). (ii) Critical Evaluation of Radioimmunoassay and Related Methods (COMAR and FRANCHIMONT). (iii) Analytical Aspects of the Dating Carbonates by Uranium and Thorium (RAFTER). (iv) Liquid-Liquid Extraction Separations in Radioanalytical Chemistry (SAITO). (v) Counting Errors in Radioactivation Analysis (LUX). (vi) Nuclear Methods for the Analysis of Fissile and Fertile Elements (SANKAR DAS and SZABO). (vii) Recommendations for the Reporting of Experimental Requirements for Radioanalytical Methods of Analysis (DE BRUIN). (viii) Nuclear Analytical Nomenclature (WHITEHEAD), a joint poject with Commission V.3.

4) Proposed New Projects. (i) Biological Reference Materials for Trace Element Determination by Radioanalytical Methods (STEINNES and KOSTA). (ii) Determination of Trace Elements in Natural Waters by Radiochemical Techniques (STEINNES); a joint Divisional Projekt.

5) Other business. Reviewed with N. E. HOLDEN, Sec. II.1, matters dealing with Nuclear Data.

6) Membership. SANKAR DAS was elected as Chairman and LUX as Secretary. STEINNES and RAFTER were re-elected; DE BRUIN and SCHWEIKERT elected as new Titular Members. CRESPI, COOK, KOSTA, FRANCHIMONT and SZABO were re-elected; COMAR, GORSKI, HISLOP, LIESER, MYASOEDOV, SAKANOUE and WHITEHEAD were elected as new Associate Members. DOCHERTY was accepted as National Representative for U. K. GIRARDI, PAPPAS, SAITO and WAINERDI retired as Titular Members.

V.8 COMMISSION ON SOLUBILITY DATA

(MEETINGS OF 2-6 SEPTEMBER 1979)

Dr. Lewis H. Gevantman
Office of Standard Reference Data
National Bureau of Standards
Washington, DC 20234, USA

Three volumes of solubility data were published by Pergamon Press in June of this year. Two additional manuscripts are with the publisher, and three more are to be submitted by the end of this calendar year. Projections for the publication of an additional eight volumes have been made for 1980.

The subcommittee was pleased to learn from Pergamon Press that the price per data volume to individuals has been reduced to $25.00 per volume.

The subcommittee has initiated discussion on the feasibility of establishing a Solubility Data Center to deal with the large volume of data now being generated by the project. Moreover, discussions were held on the value of producing an automated data file for dissemination through Pergamon Press.

New topic editors were named for carbonates, actinides, the geosciences, and colloidal systems.

The subcommittee discussed and intends to publish for scientists guidelines for the publication of solubility data in the primary literature. These guidelines will be given wide dissemination. In addition, a joint initiative was taken with the parent Commission, V.6, to request that Chemical Abstracts give consideration to reporting numerical data in its publication describing the primary literature.

The subcommittee has incurred a change in status. Starting immediately, the subcommittee will become Commission V.8 in the Analytical Chemistry Division.

The next meeting of the newly-formed Commission is scheduled for June 27-30, 1980, in Washington, DC, USA, at the National Bureau of Standards.

Present: A. S. KERTES, L. H. GEVANTMAN, J. W. LORIMER, H. AKAIWA, A. F. M. BARTON, A. BYLICKI, H. L. CLEVER, R. COHEN-ADAD, C. DRAYTON, W. GERRARD, F. W. GETZEN, C. KALIDES, K. LOENING, A MAZYNSKI, H. MIYAMOTO, G. NANCOLLAS, J. D. NAVRATIL, R. W. POTTER II, M. SALOMON, P. W. SCHINDLER, E. G. WESTRUM, C. L. YOUNG.

VI. APPLIED CHEMISTRY DIVISION

COMMISSION ON FOOD CHEMISTRY
COMMISSION ON BIOTECHNOLOGY
COMMISSION ON OIL, FATS, AND DERIVATIVES
COMMISSION ON ATMOSPHERIC ENVIRONMENT
COMMISSION ON PESTICIDE CHEMISTRY
COMMISSION ON WATER QUALITY
COMMISSION ON RECLAMATION OF SOLID WASTES

APPLIED CHEMISTRY DIVISION COMMITTEE

(MEETINGS OF THE DIVISION COMMITTEE & OFFICERS DIVISION COMMITTEE AND OPEN MEETING OF THE DIVISION DURING 2-7 SEPTEMBER 1979)

1) Guidelines. Commissions were requested to submit, in good time before the Division Committee meeting in May 1980, their comments and suggestions on the divisional guidelines which, by the decision of the Division Committee, will be formulated into rules.

2) Membership of the Commissions. The Commission Memberships for 1979-1981 were reported. For details, see IUPAC Membership List.

The Bylaws statement (B4.304) on the number of Associate Members was recognized as being unclear, and it was recommended that the number of Associate Members should not be directly connected to that of Titular Members.

After consultation with the President of the Union, it was agreed that the Commissions may recognize the services of retired Members with a scroll bearing the Union logo and signed by the Commission Chairman.

3) Publication matters. The meeting discussed at length publishing as a means of making the work of the Applied Chemistry Division better known generally and especially in industry. Dr. KOJIMA agreed to study the problem in consultation with Mr. LUXON, and to report on the possibilities to the Division Committee for further discussion.

The Commissions were requested by the end of October 1979, to amend or make supplements to the lists of reports published or completed. As a guide to whether, and how, an article or paper by Commission Members should be labelled as IUPAC work, it was agreed to incorporate a section on publications in the divisional rules.

It was felt that the present publishing procedures in IUPAC take too long, and that it should be possible to publish the commission minutes in a more complete form than as synopsis minutes, and further, that a more direct policy in publishing in journals would be desirable.

4) Programme evaluation. Based on the evaluation report by Dr. EPSTEIN, the programme of the Division was found largely to comply with the objectives of the Union. In some cases, the project information was not up to date, and therefore the Commissions were requested to categorize the projects as on-going, terminated, or new and submit the information by the end of October 1979.

It was agreed that at the next meeting the Division Committee will consider whether any changes are required in the evaluation procedures.

5) Other matters. Prof. DELLWEG, the Chairman of the Commission on Fermentation, reported that the Commission had requested that its name be changed to "Biotechnology Commission".

6) Next meeting. Next meeting will be held during the General Assembly 1981.
7) Present: Prof. H. SUOMALAINEN (President), Dr. P. CLEMENT, Dr. H. EGAN, Dr. H. FREHSE, Dr. S. FREYSCHUSS, Dr. K. KOJIMA, Dr. A. LANGLYKKE, Dr. R. MARCUSE, Prof. D. REYMOND, Prof. K. VAS, Dr. H.J. VOS (Division Committee), Prof. G. BILLEK, Dr. L. COLES, Dr. A. COLLINGS, Prof. H. DELLWEG, Mr. D. DODGEN, Dr. R. GREENHALGH, Dr. E. HAENNI, Dr. A. HAUTFENNE, Prof. A. HUMPHREY, Dr. P. KEARNEY, Mr. S. LUXON, Prof. C. PAQUOT, Prof. S.J. PIRT, Dr. R. POLLER (Commission Officers), and by invitation or as Observers Prof. G. FREEMAN, Dr. M. GELLENDER and Mr. J. OKSANEN.

1) IUPAC sponsorship. It was felt that criteria for IUPAC sponsorship should be defined more clearly and that the sponsorship forms are, in many cases, required to be filled up at too early a stage. To alleviate problems resulting from these early requirements it was suggested that the procedure for granting IUPAC sponsorship should be streamlined.
2) Guidelines. Dr. FREHSE and Mr. OKSANEN were requested to formulate ACD Guidelines into rule form. The draft rules will be considered at the next Division Committee meeting in May 1980 and, subsequently forwarded to the Bureau for approval.
3) Membership. The Division Committee elected Dr. H. FREHSE as the new Vice-President and President-Elect. For the other Division Committee Members, see the IUPAC Membership List.

The following Corresponding Members to Commissions were nominated for 1979-1981: Dr. MARCUSE (Commission on Food Chemistry), Prof. VAS (Commission on Biotechnology), Dr. VOS (Commission on Oils, Fats, and Derivatives), Mr. LUXON (Commission on Atmospheric Environment) Dr. KEARNEY (Commission on Pesticide Chemistry), Mr. SCHJØDTZ HANSEN (Commission on Water Quality) and Dr. KOJIMA (Commission on Reclamation of Solid Wastes).
4) Fund raising. To facilitate fund raising, ways of promoting knowledge about IUPAC generally and especially in industry were discussed. In addition to getting industry actively involved in individual programmes or projects, a proper publishing policy was seen as the best instrument to achieve the aim.

It was felt that fund raising for the programmes of the Commissions could be done by approaching industry through correspondence and Dr. LANGLYKKE was requested to formulate a fund raising procedure for further discussions at the next Division Committee meeting 1980.
5) Subcommittee on New Projects will submit its final report by the end of 1979 with recommended procedures and criteria for the selection of new programmes and new projects. The report will include a list of projects for consideration by the various working units of the Union.
6) Relations with other bodies. Dr. FREHSE was nominated as the liaison member to CHEMRAWN and as the representative of the Division to the Interdivisional Committee on Nomenclature and Symbols. Dr. MARCUSE was nominated as the liaison member to CODEX Alimentarius. He was also requested to establish relations with the Nordic Committee on Methods for Foodstuffs Analysis (NMKL) and revive relations with the International Union of Food Science & Technology.
7) Division open meeting. It was agreed that the Division open meeting should be developed into a more active and instructive forum. The ways to achieve this will be discussed at the next Division Committee meeting.
8) Next meeting. It will be held on 27 and 28 May 1980 at Leverkusen near Cologne (Köln).
9) Present: Prof. H. SUOMALAINEN (President), Dr. P. CLEMENT, Dr. H. EGAN, Dr. H. FREHSE, Dr. S. FREYSCHUSS, Dr. K. KOJIMA, Dr. A. LANGLYKKE, Dr. R. MARCUSE, Prof. D. REYMOND, Prof. K. VAS, Dr. H.J. VOS, and by invitation or as Observers, Prof. G. BILLEK, Prof. G. FREEMAN, Mr. S. LUXON, Mr. J. OKSANEN and Prof. G. SMETS.

1) Experimental Modification of IUPAC Organization Structure. Dr. LANGLYKKE referred to the proposal of the US National Committee for Experimental Modification of IUPAC Organization Structure stating that the responses from the Division Committee Members and Commission Officers of ACD had, in general, been unenthusiastic. He also cited the draft resolution of the Division Presidents not to favour the membership proposal described by the USNC, but to support strongly continued attempts to involve the chemical community in the activities of IUPAC.

2) Division Committee Membership. Dr. LANGLYKKE laid out the composition of the Division Committee as a result of mail ballot and nominations within the Committee; for reference, see IUPAC Membership list.

3) Division Commissions. Dr. LANGLYKKE reported that the Division President has proposed to the Bureau that the new Commission on Food Chemistry should have 8 Titular Members and 12 Associate Members and the new Commission on Pesticide Chemistry should have 12 Titular Members and 12 Associate Members from 1979.

4) Subcommittee on New Projects. Dr. LANGLYKKE reported that the Subcommittee on New Projects will send its final report to the Division President by the end of 1979. The report will include a list of new programmes and/or projects to be considered for incorporation in IUPAC activities.

5) Topics of interest to the Applied Chemistry Division. Dr. EGAN brought to the attention of the meeting that

- a meeting on Harmonization of Collaborative Studies will probably be held in Helsinki, 20-21 August, 1981.
- the ICSU Scientific Committee on Problems of Environment has among its broad activities a programme on Biogeochemical Cycles of C, N, O and S.
- CHEMRAWN I on Future Sources of Organic Raw Materials was held in Toronto, 10-13 July 1978; a follow up meeting is under consideration.
  CHEMRAWN II - Chemical Research to meet the world's expanding Food Needs - will be held in Manila, 1-11 February 1982. Further CHEMRAWN meetings on Chemical Aspects of the Oceans as a source and sink of chemicals and on toxicological evaluation of chemical carcinogens are under consideration.
- the Analytical Chemistry Division will set up a intercommissional project on the determination of trace metals in water; the Division also has projects on trace contaminants in food.

6) Present: The Applied Chemistry Division Officers with Dr. LANGLYKKE in the chair and 43 Division Members and Observers.

VI.1 COMMISSION ON FOOD CHEMISTRY

(MEETING OF 5 SEPTEMBER 1979)

1. The meeting was opened by Prof. Reymond, the chairman of Sub-Committee on Food Chemistry.
2. Members of the Commission on Food Chemistry, which has been born by the amalgamation of the Commission on Food Properties and on Food Contaminants are elected as follows:

Titular members:	Associate members:	
Dr. A.D. Campbell.	Dr. K. Kojima.	Dr. A.E. Wasserman.
Dr. M. Jemmali.	Prof. D. Remond.	Prof. Juszkiewicz.
Dr. S.J. Kubacki.	Prof. P. Krogh.	Dr. J.W. Howard.
Dr. L.E. Coles.	Prof. G. Grimmer.	
Dr. P.L. Schuller.	Prof. W. Kronert.	
Mr. M. Bergstrom-Nielsen.	Dr. D.E. Coffin.	
Dr. P.S. Steyn.	Mr. I.R.C. McDonald.	
Prof. G. Billek.	Mr. E.A. Walker.	

3. The Commission decided to approve following National Representatives who were nominated by the National Adhering Organizations:

Dr. A. Cantafora.	Italy.
Dr. P. Czedik-Eysenberg.	Austria.
Prof. J. Davidek.	Czechoslovakia.
Dr. T. Kato.	Japan.
Prof. A. Rutowski.	Poland.
Prof. K. Vas.	Hungary.

Decision was not made on the National Representative of FRG because of the need to ask comment of the National Adhering Organization of FRG which nominated two candidates, each one to the Commission on Food Properties and to the Commission on Food Contaminants. The Commission also decided to ask the concerned National Adhering Organization for nomination of following persons as National Representatives.

Prof. F. Bro-Rassmussen.	Denmark.
Dr. A.E. Pohland.	USA.

4. Prof. G. Billek was elected as the chairman, Dr. L,E. Coles as the vice-chairman, and Mr. M. Bergstrom-Nielsen as the secretary.
5. The Commission decided to carry on the projects which have been decided in the Commissions on Food Properties and on Food Contaminants.
6. The Commission discussed whether to carry on the study on Rapid Methods of Analysis as a project, but the decision was postponed.
7. Prof. Billek explained problems in the field of food chemistry, which are of interest to industry, e.g. low and non-calric food constituents. Among these are fibers, which still need a clear definition as well as standarddized methods for analysis. A further step in this direction could be the look for non-caloric fat substitutes.
8. Prof. Billek informed that our next meeting will be held in Hamburg on 27-29 Ausgust 1980. He also informed that the annual meeting of the commission will take place in 1981 in Belgium during the IUPAC General Assembly, and in 1982 in Vienna in connection with the V. International Symposium on Mycotoxins and Marine Biotoxins.
9. The Commission decided to organize the following working groups and to nominate liaison members:

Working Group on Inorganic Contaminants	- Chairman: Dr. L.E. Coles.
Working Group on Mycotoxins	- Chairman: Dr. M. Jemmali.
Working Group on Marine Bio-toxins	- Chairman: Prof. P. Krogh.
Working Group on Single Cell Proteins	- Chairman: Dr. K. Kojima.
Liaison-Member to ISO:	- Dr. L.E. Coles.

Liasison Member to the Joint Mycotoxin Committee of Association of Offical Analtical Chemists (AOAC), American Oil Chemists Society, and American Association of Cereal Chemists: - Dr. A.D. Campbell.

(FORMER) COMMISSION ON FOOD PROPERTIES

(MEETINGS OF 3-6 SEPTEMBER 1979)

A successful collaborative study has been carried out on thedetermination of volatile nitrosamines in cheese, and a further study on volatile nitrosamines in herbicides (suggested during a joint meeting of the Food and Pesticide Commissions) is almost completed.The proposed study on methods for non-volatile nitrosamines in foods had to be delayed due to problems in preparing the silyl derivative for analysis. Efforts will now be directed toward the determination of total N-nitrose compounds in foods, to be applied in conjuction with established methods for volatile nitrosamines.

The IUPAC -IARC workshop on the analysis of nitrites in foods will be held in Lyon in May 1980, as a prelude and guide to future IUPAC work on the problem of distinguishing free and bound nitrite.

A collaborative study of a method for the similtaneous determination of a number of antioxidants in foods has just been performed. Results have not been fully compiled and evaluated, but preliminary indications are that the study may have to be repeated because of faulty sample handling by some laboratories.

A new glass-capillary gas-chromatographic method has been developed for the determination of basic nitrogen-containing aromatic compounds as carcinogenic contaminants in smoked meat, fish, and poultry, as well as single cell proteins. The method will be subjected to collaborative study by at least 15 laboratories.

The project on residues in edible products from treated livestock is in the process of being reactivated.

The project on synthetic colors in foods has been launched with the appointment of a project leader and working group.

All of the projects mentioned above have been recommended by Commission VI.I for continuation in the new Commission on Food Chemistry.

Two reports have been published recently in Pure & Applied Chemistry: Recommended Methods for the Determination of Polycyclic Aromatics in Foods (Vol. 50, 1978, 1763-73), and a survey of methods for the Determination of Non-Volatile Nitrosamines in Food (Vol. 51, 1979, 1367-73).

VI.2 COMMISSION ON BIOTECHNOLOGY (FORMERLY COMMISSION ON FERMENTATION)

(MEETINGS OF 5-6 SEPTEMBER 1979)

1. Three projects had been completed in the past year. A report on Guidelines for testing of single cell protein destined as a protein source for animal feed II was ready for printing. A set of recommended Terms and Symbols for use in biotechnology had been completed and was to be submitted to ICDNS for approval prior to publication. A comparative study on Two simple methods for evaluation of the fermenting power of baker's yeast was ready for publication.

2. Excellent progress had been made on the preparations for the 6th International Fermentation Symposium in London, Ontario in July 1980. Preparations have started to complete a proposal for the 7th IFS to be held in India in 1984.

3. Two major new projects were started following inter-commission technical discussion meetings. One project on renewable resources has the objectives of recommending methods for determining :

(i) chemical and physical characteristics of substrates and products derived therefrom,
(ii) enzymic and microbial activities involved in such systems,
(iii) mass and energy balances.

The second new project is to establish Guidelines for testing microbial protein destined as a component for human food.

4. Commission Membership

Titular Members

Prof. H. Dellweg, (Chairman), Prof. C.L. Cooney (Vice-Chairman), Dr. R.C.Righelato (Secretary), Prof. H.T.Blachere, Prof. T.K.Ghose, Prof. J. Hollo, Prof. J.Takahashi.

Associate Members

Dr. V.K. Eroshin, Prof. A. Fiechter, Dr. G. Hamer, Prof. A.E.Humphrey, Dr.F.Parisi, Dr. G. Stewart, Prof. J.E. Zajic.

National Representatives

Dr. R.J. Ertola, Dr. Ing. H. Wutzel, Dr. M. Linko, Prof. M. Ringpfeil, Dr. O. Ilnicka-Olejniczak, Dr.A.F.Langlykke, Dr.P.P.Gray, Prof. W. Borzani.

Corresponding Member of Division - Prof. K. Vas

5. The next meeting will be held in London, Ontario during the 6 I.F.S. 20th-25th July 1980.

6. Present

A.E. Humphrey; H. Dellweg; R.C.Righelato; C.L. Cooney; T.K.Ghose; H.T.Blachere; V.K.Eroshin; J.C.Hoogerheide; F. Parisi; J. Takahashi; J.E.Zajic; H. Wutzel; M. Linko; M. Ringpfeil; O.Ilnicka-Olejniczak.

VI.3 COMMISSION ON OILS, FATS AND DERIVATIVES

(MEETINGS OF 3-5 SEPTEMBER 1979)

1) Chairman's Report

The Chairman recalled events which affected Members of the Commission and Leaders of the Division of Applied Chemistry. He thanked all those who on the point of leaving the Commission collaborated to its activities, and he welcame the new Members and Observers.
Approaching the important problem of the Working Groups activities, he communicated Prof. SUOMALAINEN's laudatory opinion relating to these wide working programmes.
The Chairman pointed out that the 6th Edition of the Standard Methods was on sale in English and in French. He took pleasure in announcing that in the future the 'Revue Française des Corps Gras' will publish in-extenso reports of experimental results corresponding to the methodologies adopted. This point raised up several comments and it appeared that publication of these experimental results in 'Fette und Seifen Anstrichmittel' and in the 'Journal of the American Oil Chemists' Society' should be useful.
The Chairman pointed out also that the Commission was in good communication with ISO and the CEE organisations.
Finally he invited the Commission to meet in Paris next year and at this juncture to celebrate its 50th Anniversary.

2) Membership

Dr. J. CORNELIUS, Dr. B. CRAIG, Prof. E. DELVAUX, Prof. J. HOLLÒ, Dr. W. LINK, Prof. R. MONACELLI, Dr. H. WENDT have resigned their functions in the Commission.

The Commission approved the nominations of Prof. M. NAUDET and Prof. H. WESSELS as Titular Members, and the nominations of Dr. J. GRACIAN TOUS, Dr. Mrs. E. KURUCZ, Mrs. E. LEWKOWITSCH, Mr. A. MØLLER and Dr. M. TEUPEL as Associated Members.
Were also approved the nominations as National Representatives of Dr. E. FEDELI (Italy), Dr. Mrs. B. OŠTRIČ-MATIJAŠEVIČ (Yugoslavia), Dr. A. TULLOCH (Canada), Mrs. A. VISAPÅÅ (Finland), Dr. A. WALTKING (USA), Dr. J.-P. WOLFF (France),and of Prof. R. LINKO (Finland) as Observer.

3) Working Groups

The following Working Groups will pursue their activities (in parentheses: name of the relevant Chairman):

WG 2 : Determination of total oxidized fatty acids by TLC (M. NAUDET)
WG 3 : Determination of tocopherols (free and esterified) in oils, fats, margarine (P. HENDRIKSE)
WG 4 : Determination of chlorinated pesticides in woolwax (G. ZWERENZ)
WG 5 : Determination of linoleic acid in oils and fats (Ö. LEVIN)
WG 7 : Analysis of heated fats (H. WESSELS)
WG 8 : Identification and determination of emulsifiers (derived from fatty materials) in oils and fats (H. BRUSCHWEILER)
WG 9 : Publication of methods (A. HAUTFENNE)
WG 12 : Determination of polyethylene in oils and fats (J. van der WEEL)
WG 13 : Determination of undesirable plastic-based contaminants (other than polyethylene) in oils and fats (Ö. LEVIN)
WG 16 : Methods of analysis for glycerines (A. MØLLER)
WG 17 : Methods of analysis for alkaline soaps (H. BRUSCHWEILER)
WG 18 : Determination of erucic acid (H. WESSELS)
WG 1/78 : Identification and determination of industrial lecithin constituents (Ö. LEVIN)
WG 2/78 : Determination of solid content of fats by NMR techniques (M. NAUDET)
WG 3/78 : Determination of polycyclic aromatic hydrocarbons content in fats (D. FIRESTONE)

Three new Working Groups were created:

WG 1/79 : Determination of erythrodiol content in grapeseed oil (J. GRACIAN TOUS)
WG 2/79 : Total and quantitative determination of sterols (M. NAUDET)
WG 3/79 : Determination of solvents residues in oils (H. VOS)

4) Publications

The 6th Edition of the Standard Methods for the Analysis of Oils, Fats and Derivatives is on sale.
It is edited in English by Pergamon Press, and, in French, by ETIG for the 'Institut des Corps Gras'.

5) Date and place of next meeting

2 - 5 September 1980 - PARIS - 50th Anniversary

6) Present

Members: C. PAQUOT (Chairman), A. HAUTFENNE (Secretary), T. ASAHARA, J. BEARE ROGERS, H. BRÜSCHWEILER, M. CHAKRABARTY, D. CHOBANOV, A. DIEFFENBACHER, U. ENGELRUD, D. FIRESTONE, J. GRACIAN TOUS, P. HENDRIKSE, V. KAPOULAS, A. KARABATUR, E. KURUCZ, E. LEWKOWITSCH, B. McGWYNNE, T. MØLLER, M. NAUDET, Ö. LEVIN, R. OHLSON, J. POKORNÝ, M. TEUPEL, J. van der WEEL, A. VISAPÄÄ, H. VOS, H. WENDT, H. WESSELS, K. WILLIAMS, J.-P. WOLFF, G. ZWERENZ.
Observers: H. CHAVERON (O.I.C.C.), J. GRACIAN TOUS (C.O.I.), G. HØLMER, W. HORWITZ (A.O.A.C.), A. HUBBARD (Codex Alimentarius), C. MOXHET, A. KARLESKIND, W. POCKLINGTON, K.WILLIAMS (B.S.I.), R. ZWART (N.N.I. - ISO/TC 34/SC 10).

VI.4 COMMISSION ON ATMOSPHERIC ENVIRONMENT

(MEETINGS OF 3-6 SEPTEMBER 1979)

ROLE OF THE COMMISSION

In the past, the Commission had concentrated on the analytical aspects of the control of atmospheric (workplace and ambient) contaminants. There was now a change in attitudes within IUPAC and the Commission was being encouraged to broaden its scope of activities so that when an analytical method is published information on the nature, significance and control of the contaminant is also included. This would put the problem into persepctive and increase the contribution being made by the Commission.

LIAISON WITH COMPANY ASSOCIATES

The Commission will continue to inform company associates of the progress being made on the various projects. It was noted that often IUPAC information goes to the library or information section and does not reach the people in industry who could best made a positive contribution. It was considered that meetings were the only way of overcoming this problem. A meeting with UK company associates would be called in 1980. It was agreed that members should consider the possibility of such meetings in other countries.

LIAISON WITH INTERNATIONAL AGENCIES

Contact had been maintained with ISO, ILO, UNEP, SCOPE, WHO, ECE, UNESCO and OIML. The Commission could make a positive contribution to many of these agencies. However, there was a need for a direct approach before finance would be forthcoming. Financial arrangements were under discussion with UNEP (via SCOPE) and EEC.

PROGRESS ON PROJECTS

A review of methods for the analysis of benzene in the workplace environment has been finalised together with a paper on revised standards for detector tubes. The first of a series of papers on sampling strategy dealing with the workplace environment has also been completed.

A method for the determination of asbestos in air has been agreed, but the method will not be realised until the interlaboratory problems have been resolved. The method for the determination of vinyl chloride monomer in air will be published together with a review in preparation on the toxicological aspects of the problem. The available methods for the determination of toluene diisocyanates in air were reviewed but the available methods are too insensitive to service the proposed 0.001 ppm limit. It was hoped to organise a symposium on fluorocarbons and ozone in the atmospheres in association with an appropriate government agency. The work on collation of methods for the analysis of nitrosamines in air would continue.

NEW PROJECTS

The Commission initiated new projects for a symposium on the Safe Use of Solvents, on the generation of standard test atmospheres and for the determination of nickel in the workplace atmosphere.

MEMBERSHIP

Prof. R. Benarie was elected Titular Member and Prof. R. Smith and Mr. C. Birrett Associate Members.

MEMBERS PRESENT

Mr. S. Luxon, Chairman. Dr. A.J. Collings, Secretary. Mrs. M. Fugas. Mr. K. Leichnitz. Mr. C. Birrett.

NEXT MEETING

The Commission will meet next in September 1980.

VI.5 COMMISSION OF PESTICIDE CHEMISTRY

(MEETINGS OF 3-7 SEPTEMBER 1979)

1) Membership - The new Commission was inaugerated. It is an amalgamation of the defunct Commissions of Terminal Pesticide Residues and Residue Analysis and will consist of 12 Titular and 12 Associate members for the period 1979-81. The election of Drs. N. AHRONSON, A. AMBRUS, H.O. ESSER and W. KLEIN was approved as associate members.

2) Present - P.C. KEARNEY (Chairman), J.A.R. BATES (Vice-Chairman), R. GREENHALGH (Secretary), V. BATORA, K.I. BEYNON, D.G. CROSBY, N. DRESCHER, R. ENGST, S. GORBACH, P.A. GREVE, M.A. KLISENKO, J. MIYAMOTO (Titular); J. DESMORAS, H.O. ESSER, R. HEMINGWAY, W. KLEIN, H.P. THIER, S.L.J. VITOROVIC, J.W. VONK (Associates); H. FREHSE, H. GEISSBUHLER, S. GRUBER, K. ELGAR (Invited).

3) Projects Terminated - (a) Nitrosamines and Pesticides, (b) Chlorophenols (c) Definition of Persistence, (d) Compound Reviews-Fungicides (e) JMPR Reviews (1979).

4) Projects on-going - The following reports were discussed and work will continue on, (a) 5th International Congress of Pesticide Chemistry (1982), (b) Confirmatory Techniques, (c) Simple Methods of Analysis, (d) Guidelines on Residue Data, (e) Special JMPR Compound Reviews, 1980, (f) Pyrethroids, (g) Bound Residues, (h) Model Ecosystems, (i) Organotins, (j) Characterization and determination of Residues, (k) Analytical Methodology.

5) New Projects - (a) Integrated Residue Data. Exploratory reports also will be prepared on, (b) Characterization of technical Organophosphorus Pesticides, (c) Guidelines for Metabolic Studies on Pesticides, (d) Sequential Testing in Environmental Chemistry.

6) Publications - (a) Definitions and Guidelines for describing and Evaluating Pesticide Residues (P.A.C. 51: 677-680, 1979); (b) Status report on Clean-up and determination Procedures (P.A.C. 51: 1603-1613, 1979); (c) Recommended Methods for the determination of Residues of Pyrethrins and Piperonyl Butoxide (P.A.C. 51: 1583-1601, 1979). In addition, reports on (e) Nitrosamines and Pesticides and (b) Residue Analysis of System Fungicides have been submitted to the Chairman, A.C.D. for approval to publish.

7) Congresses - The results of the Zurich Congress (1978) were analyzed. The next International Congress on Pesticide Chemistry, Kyoto (1982) will utilize poster sessions as the main form of data presentation. First announcements will be sent out January, 1980.

8) Next Meeting - This will take place at Lyon, France, 21-25 July, 1980.

VI.6 COMMISSION ON WATER QUALITY

(MEETINGS OF 4-6 SEPTEMBER 1979)

Dr. Karlheinz Trobisch

HOECHST AG

623 Frankfurt am Main 80

The minutes of the previous meeting held in Frankfurt am Main (FRG) on 11 - 12 April 78 (see Inf. Bull. 1978, No.3, pp 209-210) have been adopted.

The programme of the Commission summarized in the following was discussed extensively in Davos.

(i) 3rd International Congress on Industrial Waste Water and Wastes, Stockholm: 6 - 8 February 1980.

Following the successful congresses in Stockholm in 1970 and 1975 sponsored by IUPAC, the Commission discussed the idea of a follow-up meeting during its meeting in Warsaw in 1977. Preparations for the congress are proceeding according to plan. Between 700 and 900 participants are expected. The congress will be opened by His Majesty the King of Sweden, Carl XVI Gustaf.

(ii) Nomenclature in hydrochemistry.

Prof. Wagner reported on a collection of definitions of terms, above all on biological degradability, which had been compiled in the FRG. Following international coordination, a corresponding IUPAC paper is to be published.

(iii) Education in hydrochemistry.

A questionnaire on education in hydrochemistry has been prepared. It has been decided to send it first of all to the members of the Ges.Deutscher Chemiker (Association of German Chemists) in the Federal Republic of Germany. In addition the questionnaire is to be distributed in a developing country, namely Brazil if possible.

(iv) Present state of development in waste water treatment techniques in the chemical industry and possible future trends.

Dr. Trobisch explained and distributed the draft of a publication which is to be printed as a IUPAC conception in the Information Bulletin. The final version of the publication is to be passed at the next meeting of the Commission.

(v) Future work of the Commission.

In a paper distributed at the meeting in Davos, Dr. Goldshmid has submitted fundamental proposals for further work of the Commission. These proposals have been authorized in principle. Concrete measures are to be discussed at the next meeting.

(vi) Miscellaneous

The chairmanship has been taken over by Mr. Schjödtz-Hansen.

The next meeting is scheduled to take place in Stockholm on 4 and 5 February 1980.

VI.7 COMMISSION ON RECLAMATION OF SOLID WASTES

(MEETINGS HELD 3-6 SEPTEMBER 1979)

1) Project on Reclamation of Waste Plastics. Final reports on this project were made and the following papers were read and discussed "Re-Use and Separation of Plastics Materials" by L. G. LINDFORS, "Reclamation of Waste Plastics and Rubber: Recovery of Materials and Energy" by R. C. POLLER, "Microbial Degradation of Synthetic Polymers" by S. J. PIRT, "The Fate of Carbon Compounds in the Landfill Disposal of Organic Matter" by J. F. REES. These papers will be published in the Journal of Chemical Technology and Biotechnology.

2) Commission Membership. It was agreed to recommend that R. C. POLLER become Chairman (1979-1983) and L. G. LINDFORS Secretary (1979-1983). H. GRETHLEIN becomes a titular member and it was proposed that K. J. THOMÉ-KOZMIENSKY be appointed to the vacant titular membership caused by the retirement of S. J. PIRT who becomes an associate member.

3) New Projects. It was agreed that work would begin on the following four new projects:

(a) Sociological aspects of solid waste reclamation (including education, incentives and publicity)

(b) Composting: proposed guidelines for standardization

(c) Survey of low waste technology (including new industrial processes designed for minimum waste; separation/recovery techniques for domestic and industrial refuse)

(d) Survey of the existing methodology for recovery of cellulosic wastes.

4) Next Meeting. This will take place during the 3rd International Congress on Industrial Waste Water and Wastes in Stockholm, February 1980.

5) Present: S. J. PIRT, R. C. POLLER, L. G. LINDFORS and J. F. REES.

VII. CLINICAL CHEMISTRY DIVISION

COMMISSION ON AUTOMATION
COMMISSION ON QUANTITIES AND UNITS
COMMISSION ON TEACHING
COMMISSION ON TOXICOLOGY

CLINICAL CHEMISTRY DIVISION COMMITTEE

(MEETINGS HELD 2-7 SEPTEMBER 1979)

1) Section Membership - Dr. Ralph Grasbeck (Finland) was elected President, Dr. F. William Sunderman, Jr., (U.S.A.), Vice President and President-Elect, Dr. Marc Roth (Switzerland) automatically became Past President and Dr. Morton Schwartz (U.S.A.) remained Secretary.

2) Commission on Automation - Dr. Magnus Hjelm (Belgium), Chairman reported that in collaboration with the Commission on Analytical Nomenclature, a document is being prepared entitled, "Nomenclature for Automated Analyses". Other documents are in preparation including "Electronic Data Processing and Microprocessors". Dr. Donald Young (U.S.A.) was proposed for renewal as a titular member.

3) Dr. Robert Zender (Switzerland) reported that a document on "General Quantities in Clinical Chemistry" has been published in Clinica Chimica Acta and is in press in Pure and Applied Chemistry. A provisional document "Spectroscopy I" has appeared in both above mentioned journals. Another document "Nomenclature of Derived Quantities" is in preparation as is one entitled "Spectroscopy 3" and one related to blood pH and pCO_2 and pO_2. Dr. Peter Lehman (U.S.A.) was proposed as a titular member, Dr. R. Hermann reappointed titular member and L.F. Bertello (Argentina) as associate member.

4) Dr. David Curnow (Australia) reported for the Commission on Teaching in Clinical Chemistry. A document describing a two-year Master of Science Course in Clinical Chemistry is in press in Clinica Chimica Acta, the monograph on Education and Training will be updated and efforts are underway to promote education of clinical chemists in Southeast Asia, Thailand and the Philippines. Dr. Worth (U.K.) and Dr. Zinder (Israel) were recommended as titular members of the Commission.

5) Dr. William Sunderman (U.S.A.) reported for the Commission on Toxicology that a document on "Radiochemistry of ^{63}Ni in Biological Research" has been published in Pure and Applied Chemistry and that one on "Analytical Biochemistry of Nickel" is in preparation. An interlaboratory evaluation of a provisional reference method for assay of nickel in biologic fluids is nearing completion as is an interlaboratory survey of cadmium analysis. A monograph on serum cholinesterase is in press in Advances in Clinical Chemistry. The Commission will collaborate with other interested bodies in a Symposium on Organ-Directed Toxicity in Barcelona, Spain on March 4-7, 1981. Dr. Markus-Stoeppler (FRG) was recommended as titular member and Dr. Michel Mercier (France) as associate member.

6) Subcommittee on Clinical Chemical Standards - This subcommittee to be chaired by Dr. van Kemper (Netherlands) was established and terms of reference were drawn up.

7) Elevation of Section on Clinical Chemistry to Divisional Status - A formal recommendation for this upgrading to be submitted to the IUPAC Bureau and Council was prepared for presentation at the Davos Meeting.

8) The next meeting of the Section on Clinical Chemistry will be held in Louvain, Belgium on August 25, 1981.

VII.1 COMMISSION ON AUTOMATION

(MEETINGS OF 4-6 SEPTEMBER 1979)

1) The document "Characteristics and Attributes of Instruments intended for Automated Analysis in Clinical Chemistry" had been printed in its preliminary version in the IUPAC Inf. Bull. No. 3 (1978), pp. 233-240. Some comments of editorial nature had been received. The final revision of the document will be made in April 1980.

2) The new document "Nomenclature for Automated Analysis" was discussed in the Commission and jointly with the Commission on Analytical Nomenclature (V:3).
It was decided that...

- the document should include a complete set of terms necessary to describe automated analytical procedures, also general terms.
- definitions already given by IUPAC, IFCC or other competent bodies, should be used as much as possible and if appropriate with minor modifications of the text.
- the Commission on Automation should take the responsibility for the compilation of a first draft to be distributed to the members of both Commissions before the end of 1979.
- that a second draft should be discussed at a new meeting in Munich in April 1980 with as many representatives as possible from the two Commissions in order to prepare a manuscript for printing.

3) A proposed document on "Electronic Data Processing and Microprocessors in Clinical and Analytical Chemistry" The Commission will prepare a proposal for a document in this field, especially concerning applications related to calibration functions. The execution of that task would, no doubt, require a changed composition of the Commission on Automation.

4) Next Meeting. In the period from the 28th April - 3rd May, 1980 during the "Biochemische Analytik" in Munich.

5) Present. J. BIERENS DE HAHN, J. BÜTTNER, M. HJELM, T.P. WHITEHEAD, Members.
J.C. JADILLIER, W.C. DURDY, Observers.

VII.2 COMMISSION ON QUANTITIES AND UNITS IN CLINICAL CHEMISTRY

(MEETINGS HELD DURING 2-7 SEPTEMBER 1979)

Presents : R. Zender, chairman, R. Herrmann - P. Lehmann - C. Onkelinx - O. Siggaard-Andersen - B.F. Visser (titular members CQUCC and/or EPQU) - R. Oybkaer - K. Jørgensen - P. Métais - C. Rigg (associate members CQUCC).

1) Minutes of EPQU/CQUCC meeting in Wageningen 1979-01-04 to 06 were approved with no modification.

2) Membership - The nomination of Or Peter Lehmann as titular member of CQUCC will be proposed at the meeting of the Section on Clinical Chemistry. A further associate member to CQUCC will be proposed in the person of Prof. L.F. Bertello from Argentina.

3) The 2 approved documents : "Quantities and Units in Clinical Chemistry, recommendation 1978" and "List of quantities in Clinical Chemistry, recommendation 1978" are under press in Pure and Applied Chemistry.

4) The document : "Quantities and Units in Clinical Chemistry, Optical Spectroscopy : Part 1 Theoretical outline and general quantities has been modified and should be submitted for approval to the IUPAC Section, IOCNS and Council.

5) The document "Provisional recommendation on quantities related to H^+, CO_2 and O_2 in the blood, part 1 physical chemical quantities and units" will be presented at the section meeting in Oavos with a view to its publication.

6) The document "Basic Concepts and Terms in Clinical Chemistry" will be presented to IUPAC Section on Clinical Chemistry in view of its publication.

7) The document "Nomenclature of derived quantities" will be redrafted in view of a wide circulation within IUPAC.

8) The document "Quantities and Units in Clinical Chemistry, Optical Spectroscopy part III, molecular and atomic emission and absorption spectrometry in physico-chemical plasmas will be redrafted with a view to its presentation to the IUPAC Section on Clinical chemistry.

9) It has been decided to delay a document on molecular absorption spectroscopy because commission V.4 has now begun to work on a similar project. Furthermore our commission has been invited to nominate a full member to participate to this work and Or Kjeld Jørgensen has been elected for this.

10) The document "Changes in properties with time" has been shortly discussed.

11) The future document on number '1' and ways of expressing powers of '10' was shortly discussed.

The next meeting of IFCC EPQU is scheduled 1980-03-10 to 12 in Copenhagen

VII.3 COMMISSION ON TEACHING OF CLINICAL CHEMISTRY

(MEETINGS OF 4-6 SEPTEMBER 1979)

Professor. D.H. CURNOW

Department of Clinical Biochemistry,
Queen Elizabeth II Medical Centre,
Nedlands, Western Australia,
Australia 6009

1. Review of Projects.

(i) The two year M.Sc. program is now ready for publication (C.J. PORTER).

(ii) A document on the teaching of clinical chemistry in the medical curriculum based on international surveys will be prepared for early publication (P. LOUS).

(iii) Considerable progress has been made in developing a document on the Basic Training of Technical Personnel in Clinical Chemistry (D.H. CURNOW).

(iv) A world-wide review of the status of Certification, Licensure and Accreditation is being prepared by M.K. SCHWARTZ.

(v) New information on clinical chemistry education will be collected to extend the Rubin-Lous Monograph. Reports will be published initially in the IFCC Newsletter.

(vi) M.Sc. programs based on the Commission's recommendations have been started in Mexico and Spain. A program will start in Cairo in 1980 (M.M. ABDEL KADER). A symposium on education will be held at the 1st S.E. Asian and Pacific Congree of Clinical Chemistry in Singapore, October 1979 to define some of the problems of the area (D.H. CURNOW).

(vii) A library of reading material for course organizers is being compiled (C.J. PORTER).

2. Collaboration with IUB. Prof. P. Campbell, Chairman, IUB Education Committee stimulated efforts to collaborate on teaching programs in developing countries.

3. Terms of Reference. A proposal presented by D.H. CURNOW was adopted.

4. Membership. The following new composition of the Commission is recommended.
D.H. CURNOW (Chairman), C.J. PORTER (Secretary), M.K. SCHWARTZ, H.J. WORTH, O. ZINDER (Titular Members). E. CONCUSTELL-BAS, J.A. CORREA, B. DASTUGUE, D. DOSCHEV, P. LOUS, V. MENSHIKOV, B. STRAUS (Associate Members).

5. Next Meeting. Boston - prior to the joint AACC-CSCC Annual Meeting, July 1980.

6. Budget. Biennial 1980-81. Secretarial $250 U.S. each year. Fares and subsistence based on T.M. attendance (1980 Meeting: approximately $4,600. U.S.).

7. Present. D.H. CURNOW (Chairman), C.J. PORTER (Secretary), M. ROTH (Titular Members). M.M. ABDEL KADER (Associate Member). W. PURDY, P. CAMPBELL, T. WHITEHEAD (by invitation).

VI.4 COMMISSION ON TOXICOLOGY

(MEETINGS OF 5-6 SEPTEMBER 1979)

1. Reports on Sub-Committee Activities.

(a) Nickel: The monograph on ^{63}Ni had been published in Pure and Applied Chemistry (1979, 51, 1375-1389). A paper on the analytical biochemistry of nickel will now go forward for publication. Valuable findings have emerged from the inter-laboratory trial of the provisional reference method for nickel analysis. Plans were made to continue and complete this work. Approval was given to arrangements for the Second International Conference on Nickel Toxicology, to be held in Swansea, 3-5 September 1980.

(b) Cadmium: Two pilot inter-laboratory studies of analysis of cadmium in blood have been completed and a larger trial was planned, to select a candidate reference method.

(c) Cholinesterase: The draft review on Plasma Cholinesterase (to be published in Advances in Clinical Chemistry) had been circulated. Methodology had not been included but it was planned to prepare a complementary review of cholinesterase methodology.

2. Proposal to Establish a Sub-Committee on Aluminium. Dr. Savory introduced a discussion of aluminium metabolism. It was agreed that the implications for neurological and bone diseases merited preparation of a proposal for the establishment of a new Sub-Committee.

3. Symposium on Organ-directed Toxicity, Barcelona, 4-7 March, 1981 This Symposium would be held in conjunction with the IUPHAR Section on Toxicology, the Spanish Society for Clinical Chemistry and the Spanish Pharmacology Society. Potential plenary lectures had been identified, and it was proposed to distribute the second circular in March/April,1980.

4. 2nd Symposium on Clinical Chemistry and Chemical Toxicology of Metals, March 1982. Tentative plans for this Symposium were discussed and the following Scientific Committee appointed: Prof. Sunderman and Dr. Hernberg, Co-Chairmen; Dr. Mikac-Devic, Secretary; Dr. Tonks, Treasurer; Dr. Brown, Editor; Dr. Savory, Dr. Stoeppler and Dr. Saric (Yugoslavia), Members.

5. Discussion with the Commission on the Atmospheric Environment (VI.5). The possibility of establishing a link between the Conference on Nickel Toxicology (Minutela) and a meeting on Occupational Hygiene (to be held in Cardiff in September 1980) would be followed up by the two Commission Chairmen.

6. Composition of the Commission. It was agreed that Dr. Stoeppler would be nominated to fill the vacancy for a Titular Member. It was proposed that Dr. Savory should succeed Dr. Brown as Secretary for the period 1979-1981, and that Dr. Brown should be Vice Chairman for the same period.

7. Next Meeting. This will take place in Swansea, 10-12 September 1980. It was also tentatively agreed that the Commission would plan to meet in conjunction with the Barcelona Symposium (4-7 March, 1981), and/or the IUPAC Conference, Leuven (September, 1981).

8. Present. Members - F.W. Sunderman, Jr. (Chairman), S.S. Brown (Secretary), M. Mikac-Devic, J. Savory, M. Stoeppler and D.B. Tonks; Observers - R.J.M. Ratcliffe and Members of the Commission on the Atmospheric Environment.

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The International Union of Pure and Applied Chemistry (IUPAC), formed in 1919, is a voluntary, non-governmental, non-profit association of organizations, each of which represents the chemists of a member country.

Its objectives are:
to promote continuing co-operation among the chemists of the member countries;
to study topics of international importance to pure and applied chemistry which need regulation, standardization, or codification;
to co-operate with other international organizations which deal with topics of a chemical nature;
to contribute to the advancement of pure and appplied chemistry in all its aspects.

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